${\tt MIKGVTLGFHYKMRSVYAHFPINVVIQENGSLVEIRNFLGKKYIRRVWMRAGVVCSVSQAQKDELILEGNDIELV}\\ {\tt SNSAALIQQATTVKKKDIREFLDGIYVSEKGTGQQADE}$

 ${\tt MGVHVETISPGDWRTFPKRSQTCVMHYTGMLEDGKKFDSSRDRNKPFKFMLGKQEVIRGWEEGVVQMSVGQRAKL}\\ {\tt TISPDYAYGATGHPGIIPPHATLVFDVELLKLE}$

CGCCTTGGCCATTTGCCAGCCACAACCCAGGACCTCCAATGGGGACGCCCACTGAGGATCCTAGTGGTTGCTC TTTTCCTTGTCTCTTTCCCCCCAGTCTTTCCTTGTTCTATCATGGGCAATTTCCCGCCTTCCATCCCTCTT TCTTCTGTCTGGCTTGTGTCCTCAGAAACCTCAAACCTCTTCACCTTGCACCCAATCTAAAGGCTAAACGTCTAA TTTTTTTCTGTAACACGTCCTGGCCCCAGTATAAATTAGAAAATGGCGCTCAGTGGCCAGAAAACAGCACTTCCA ATTTCTCTATTTTGTGGGACTTAGACAACTTCTATGGAAAAATGGGCAAATGGGTCTGAGGTACCCTACTTCCAG TGTCTACCCCTCCTTCTTCCACTGGCGATGCTGACTCCTCTTTGTCTGTTGACCCCTCCGATCTTTCTCCCCCAC CACCTATCCGAACCTGCTTCTAATTCTCCCCCAGAACCTATTTCTACCCACAATCCACCTCTTATGCCCCTCCC ATTACCACCCTTCCTCACATCCTCTATGGCTTACAGTTTGGGCCTGCGACCCAACCCCCAGGCCCCTGCCTAGCAA TTTCCCCTCGGAGAGGTGGCAGGAACCAAAGGAATAGTTCGGGTTCAGGTCCCTTTCTCCCTGTTCGACCTTTCC CAAATTAGTGAACATCTAGGCTCTTTCCCATCTGACCCCACCAATATATACGAGAATTCCAATACTTAACCCAG TCCTATAATCTTACTTGGAATGACTTAAATGTCATCCTTACCTCTACCCTCGCTCCTGAGGAGTGAGAGTGGGTT TGGATCCTAGCTCAATCTTAGGCTGATAACCGCCGGTGCCGTAAGCCTGGCCTCCAGTAAGGTGCTAGGGCAGTA CCCTGTGAAGACCCCGGATGGACTTACCAGGCCCTGGGACCCATGCATAGCCAGGCGGGACTACATGATCTCTTG CCTAGTTAAAGGCCTTCAGAAGGCTGCATATAAAGCCGTCAATTATGACAAACTAAAAAAACAAAAACAAAAACAA AAAAAACCACTCAGAACAAAGATAAAAATCCAGCTCAGTTTATGGCCTGTCTACCTGCCACCCTCAGGCGATATA GTAGAAAGAAACTTCAAAAATTAGAGTCTGGCTCTCAGATCCCACAACAGGAATTAATCAACCTCGCCTTCAAGG TGTTCAATAATAGGGAAGAGCTGCCCGGCGACAGCGCATTTCAGAACTACAGATGCTTGCCTCCGCCATAAGAC AAACCCCAGCTGCACTGCCTACCTGCAAGAACTTCAAGGCATCTAAACGCAACATCCAACAGCCCCTCTGGGACT TTGCTTCAAGCGATGAAAACCTGGCCACTGGGCAAGGAATGCCTGCAGCCTGGGATTCCTCCTAAGCCATGCCCC GCCTGTGCGTCCCTCACTGGAAGTCTGACTGCCCGACTCTCATCGCCACTTCCGGAGCTCCTGGAGCTCAAACCC AAAGCTCCCCACCGACTCCTTCCCAGATCTCCTCGGCTTGGCGGCTGAAGACTGACGCTGCCCGAACGTCTCGGA GGCCCCTTAGACAATCGCGGATGCCGAGCTTCGGGTAACTCTTAGGGTGGAGGCATAAAAAGACAGGAATGTAAG GTCCTCTGAGCAGGCGGCGCCATGGTCAAGCCATCGTGACCCCTGTGACTCACACGTACACATCCAGAAGGTCTC CTGGAGCCAGAAAGTCTGGGACGACAGGAAAACCACAAAAGAAGAAAAA

GGGCCTGGACGCTTTGGCAACCGCTACTCCCGGGGGTGCTTTTTCTGCAGGGACGAAGTGCCACCTATGCTAGTG GCGGGTCTGGAAGCCTAGAGGGGAACCAGGCTGCAGAGCCGGGCCAAGGGATTAGCGGCGGCGGCGGCGGCATGGC $\verb|CCCGGGTGAGCAGGGTCCTCCCGGGCCCCCTGGAGTTCCAGGCATCGATGGCATCGACGGTGACCG|\\$ AGGTCCTAAGGGCCCCCGGGCCCCCGGGTCCTGCAGGTGAACCGGGAAAGCCAGGAGCTCCAGGCAAGCCTGG CACACCTGGCGCTGATGGATTAACAGGACCTGATGGATCCCCTGGCTCCATTGGGTCAAAGGGACAAAAAGGAGA ACCTGGTGTCCTGGATCGCGTGGATTTCCAGGCCGTGGTATTCCTGGACCCCCTGGTCCTCCTGGGACAGCAGG ACTCCCTGGAGAGCTTGGCCGTGTAGGACCTGTTGGTGACCCTGGGAGAAGAGACCACCTGGCCCCCCTGGCCC CCCAGGACCCAGAGGAACAATTGGCTTTCATGATGGAGATCCATTGTGTCCCAATGCCTGTCCACCAGGTCGCTC AGGATATCCAGGCCTACCAGGCATGAGGGGTCATAAAGGGGCTAAAGGAGAAATTGGTGAACCAGGAAGACAAGG ACACAAGGGTGAAGAAGGTGACCAGGGAGAACTCGGAGAGTTGGAGCTCAAGGACCTCCAGGAGCCCAGGGTTT GCGAGGCATCACCGGCATAGTTGGGGACAAAGGGGAAAAAGGTGCTCGGGGCTTAGATGGTGAACCTGGGCCTCA GGGTCTTCCTGGTGCACCTGGTGATCAAGGACAGCGAGGACCTCCAGGAGAAGCAGGTCCCAAAGGAGATAGAGG GGCTGAAGGTGCTAGAGGAATTCCTGGTCTCCCTGGGCCCAAAGGAGACACGGGTTTGCCAGGTGTGGATGGCCG TGATGGGATCCCTGGAATGCCTGGAACAAGGGTGAACCAGGAAAACCTGGGCCTCCTGGTGATGCAGGATTGCA GGGGTTACCAGGTGTACCTGGAATTCCTGGTGCAAAGGGTGTTGCTGGTGAAAAGGGTAGCACAGGTGCTCCAGG GAAGCCTGGTCAGATGGGAAATTCAGGCAAACCGGGCCAACAGGGGCCTCCAGGAGAGGTGGGACCCCGAGGACC ${\tt CCAGGGGCTTCCTGGCAGTAGAGGAGAATTAGGACCAGTGGGATCCCCAGGCCTACCAGGTAAACTGGGTTCTCT}$ GGGTAGCCCTGGCCTCCCTGGCCTGCCCTGGGCCCCCTGGACTTCCTGGAATGAAAGGTGACAGGGGTGTAGTCGG TGAACCGGGTCCAAAGGGTGAACAGGGTGCCTCTGGTGAAGAAGGTGAAGCAGGAGAAAGGGGGGAACTTGGAGA TATAGGATTACCTGGCCCAAAGGGATCTGCAGGTAATCCTGGGGAACCTGGCTTGAGAGGGCCTGAGGGAAGTCG GGGGCTTCCTGGAGTGGAAGGACCAAGAGGACCACCTGGACCCCGGGGTGTGCAGGGAGAACAGGGTGCCACCGG CCTGCCTGGTGTCCAGGGCCCTCCGGGTAGAGCACCGACAGATCAGCACATTAAGCAGGTTTGCATGAGAGTCAT ACAAGAACATTTTGCTGAGATGGCTGCCAGTCTTAAGCGTCCAGACTCAGGTGCCACTGGGCTTCCTGGAAGGCC TGGCCCTCCTGGTCCCCCGGCCCTCCTGGAGAGAATGGTTTCCCAGGCCAGATGGGAATTCGTGGCCTTCCGGG CATTAAGGGGCCCCTGGTGCTCTTGGTTTTGAGGGGACCTAAAGGTGACTTGGGAGAAAAGGGGGAGCGTGGCCC TCCAGGAAGAGGTCCCAACGGTTTGCCTGGAGCTATAGGTCTCCCAGGTGACCCAGGCCCTGCCAGCTATGGCAG AAATGGCCGAGACGGTGAGCGAGGCCCCCCAGGGGTGGCAGGAATTCCTGGAGTGCCTGGACCCCGGGGACCTCC TGGGCTTCCCGGTTTCTGTGAGCCAGCCTCCTGCACCATGCAGGCTGGTCAGCGAGCATTTAACAAAGGGCCTGA CCCTTGAAAGGCTTACTGCATGGCTGTCTGCATGAACCACGCCTGGTGAAGGAGCCTGGGTGAAAAACACCA TCCAAAGCTGGGGCAAAGATGATTACCTTCAGCATGATTACAATGTATTACCTTCAGTATGATTACAGAAGTCCT ACTTGACAATCACATATAGAAGAACGGTGCTATTCAGTAAGTTCTCTTTCCTTTCCCTTGGAGGGAAGACAGCAG AGTCATCAGTTAAAAAAAAAAAAAAAAAACCAAACCCCCCTTGAATAAATTTATACTCCTGTTCCCAGGATCT TGAGCTTTAGTGTGCTATACCTATGTGTCTTATCGTGGGCCACTGTGCCAATAAACAAAAACAACTGTTTGGTTT ACCTC

GGCCGCCCTGCAGATTGTCTCTTGTTGCGTAAGTTTTTTTGACCGTCACTCGTGTCAGCTTCAAAGTCAGATA ${\tt GATTTTCTCCCAGC} \underline{\textbf{ATG}} \\ \texttt{TTCTACTTCCGAGGCTGTGGCCGTTGGGTCGCGGTTTCCTTCACCAAGCAGCAATTT} \\$ CCGTTGGCACGGTTGAGCAGTGACAGCGCGCGCCCCGGACTCCGCACTTCGACGTGATAGTCATTGGTGGAGGA ACGATCGGTCAGATGTCATGTAATCCTTCCTTTGGTGGCATCGGAAAGGGACATTTAATGAGGGAAGTAGATGCC TTGGATGGCCTGTGTTCTCGCATCTGTGACCAGTCTGGTGTACATTATAAAGTATTAAACCGGCGTAAGGGACCA CCACTGCTTACTGTTCAGGAGGGAGCTGTAGAAGATCTTATTCTTACAGAACCAGAGCCTGAACACCACTGGGAAA TGCCGTGTCAGTGGGGTTGTTTTGGTGGATGGAAGCACAGTATATGCAGAGAGTGTGATTCTGACTACTGGGACA TTTCTGAGAGGCATGATTGTAATTGGATTGGAGACGCATCCAGCAGGACGTTTAGGGGGATCAGCCTTCTATAGGA $\tt TTGGCTCAGACACTGGAGAAGTTAGGGTTTGTGGTGGGAAGGTTGAAGACTGGGACTCCACCCCGAATTGCCAAA$ ${\tt ACAGTATGGATTAAGCCAGAAGATCAGCTGCCATGTTACTTGACTCACACCCAACCCTAGAGTGGATGAGATTGTC}$ CTTAAGAACCTTCACCTTAATAGTCATGTTAAAGAAACGACAAGAGGACCTCGATACTGTCCCTCCATTGAATCA CCACAGGGGTTATCTATGACGCTACCAGCTGAGTTACAAGAGAAAATGATCACATGCATCAGAGGCTTGGAGAAA GCTAAAGTGATTCAGCCAGACGGAGTTTTGCTCTTGTTGCCCAGGATGGAGTGCAATGGTGCGATCTCGGCTCAC GGTGTGATAGCCGGAATCAACGCCAGTCTTCGGGTCAGTCGCAAGCCTCCCTTTGTGGTTAGCCGAACAGAAGGT TACATAGGAGTCTTGATTGATGACCTCACTACTCTGGGCACCAGTGAACCATACCGCATGTTTACCAGCCGAGTA GTGTCCCAACAACGATATGAAAGAGCTTGTTGGATGAAGTCTTCTTTAGAAGAAGGCATTTCTGTGTTGAAATCT ATTGAGTTTTTGAGCTCTAAATGGAAAAAATTAATCCCAGAGGCTTCTATAAGTACTAGTAGAAGTCTGCCTGTC AGAGCTCTCGATGTTCTGAAGTATGAGGAAGTTGACATGGATTCATTAGCCAAGGCTGTTCCAGAGCCCTTGAAG AAGTATACTAAATGTAGAGAGCTGGCTGAAAGACTGAAAATAGAAGCCACTTATGAATCAGTGTTGTTCCATCAA CTACAAGAAATAAAGGGAGTTCAGCAAGATGAAGCTCTCCAACTGCCAAAAGACCTAGATTATTTGACTATCAGG GATGTGTCTTTGTCCCATGAAGTTCGAGAGAAACTACATTTTAGTCGTCCACAGACGATCGGGGCTGCTAGTCGC ATACCCGGAGTAACACCTGCCGCCATCATCAATCTGCTGAGATTTGTGAAGACCACTCAACGAAGACAGTCGGCT ATTCATAAAAGATTTTTAAAGAGCATATAAATAATTTGATCAATACAACAGTATAGATAAAAGAATTATTTAGCA CATGTTAAAATAGCTTTATTAGGTTACTATGGGTTTGCCATTAATTTCTGAGTGGGACAGAAATTATAATTGTGC TGTGCAGTGTTCATCAAAGAGAGAGACAGTGAACCTAAAACTGAACCTGGAATAAAACTCAACATGCAGATTTGC CTACTCATAGGGACTTTGCCTATTAAGTCTACCAAATTAAAAGTCTTATCATTCAGCGTGTTTTGAGAGTTAATA ATCTTTTGCTTGGTTATACTAGGCTAGGAAGCAATATCAAAGCCCTTAAATTCTCAAGACTAAAGACTTGAGATT ATATAAAATTATCCAGAATCATTCAGCTAATACTATTGGAATATAGTATGTAGGGTGAAAGTTGACAGAAATCTG TACTTCTTCAGGAAATCCTCACTGGTAATTGTTTTGAACATTAATGAAAGCCCTATAAAATAGAAAGATTGGAAA TCACCATTGTTTCCTATTATCCACAGTGTGGATGGATACTTATTTGGTGACCTAGTTATGGGAGAATTGAGTAAC GTTAGTTATTTTATATCATACCATAAAAATATTTTC

MFYFRGCGRWVAVSFTKQQFPLARLSSDSAAPRTPHFDVIVIGGGHAGTEAATAAARCGSRTLLLTHRVDTIGQM SCNPSFGGIGKGHLMREVDALDGLCSRICDQSGVHYKVLNRRKGPAVWGLRAQIDRKLYKQNMQKEILNTPLLTV QEGAVEDLILTEPEPEHTGKCRVSGVVLVDGSTVYAESVILTTGTFLRGMIVIGLETHPAGRLGDQPSIGLAQTL EKLGFVVGRLKTGTPPRIAKESINFSILNKHIPDNPSIPFSFTNETVWIKPEDQLPCYLTHTNPRVDEIVLKNLH LNSHVKETTRGPRYCPSIESKVLRFPNRLHQVWLEPEGMDSDLIYPQGLSMTLPAELQEKMITCIRGLEKAKVIQ PDGVLLLLPRMECNGAISAHHNLPLPGYGVQYDYLDPRQITPSLETHLVQRLFFAGQINGTTGYEEAAAQGVIAG INASLRVSRKPPFVVSRTEGYIGVLIDDLTTLGTSEPYRMFTSRVEFRLSLRPDNADSRLTLRGYKDAGCVSQQR YERACWMKSSLEEGISVLKSIEFLSSKWKKLIPEASISTSRSLPVRALDVLKYEEVDMDSLAKAVPEPLKKYTKC RELAERLKIEATYESVLFHQLQEIKGVQQDEALQLPKDLDYLTIRDVSLSHEVREKLHFSRPQTIGAASRIPGVT PAAIINLLRFVKTTQRRQSAMNESSKTDQYLCDADRLQEREL

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CTCATTTAACTTTTTTAATGGGTCTCAAAATTCTGTGACAAATTTTTGGTCAAGTTGTTTCCATTAAAAAGTACT GATTTTAAAAACTAATAACTTAAAACTGCCACACGCAAAAAAGAAAACCAAAGTGGTCCACAAAACATTCTCCTT TCCTTCTGAAGGTTTTACGATGCATTGTTATCATTAACCAGTCTTTTACTACTAAACTTAAATGGCCAATTGAAA CAAACAGTTCTGAGACCGTTCTTCCACCACTGATTAAGAGTGGGGTGGCAGGTATTAGGGATAATATTCATTTAG CCACCGCAACTGTCTGTCTCATATCACGAACAGCAAAGCGACCCAAAGGTGGATAGTCTGAGAAGCTCTCAACAC ACATGGGCTTGCCAGGAACCATATCAACAATGGCAGCATCACCAGACTTCAAGAATTTAGGGCCCATCTTCCAGCT ATACAGGGGCATAGCCGGCGCTTATTTGGCCTGGATGGTTCAGGATAATCACCTGAGCAGTGAAGCCAGCTGCTT TGAAGCCCACATTGTCCCCAGGAAGAGCTTCACTCAAAGCTTCATGGTGCATTTCGACAGATTTTACTTCCGTTG TAACGTTGACTGGAGCAAAGGTGACCACCATACCGGGTTTGAGAACACCAGTCTCCACTCGGCCAACAGGAACAG TACCAATACCACCAATTTTGTAGACATCCTGGAGAGGCCAGGCGCAAGGGCTTGTCAGTTGGACGAGTTGGTGGTA GGATGCAGTCCAGAGCCTCAAGCAGCGTGGTTCCACTGGCATTGCCATCCTTACGGGTGACTTTCCATCCCTTGA ACCAAGGCATGTTAGCACTTGGCTCCAGCATGTTGTCACCATTCCAACCAGAAATTGGCACAAATGCTACTGTGT CGGGGTTGTAGCCAATTTTCTTAATGTAAGTGCTGACTTCCTTAACAATTTCCTCATATCTCTTCTGGCTGTAGG GTGGCTCAGTGGAATCCATTTTGTTAACACCGACAATTAGTTGTTTCACACCCAGTGTGTAAGCCAGAAGGGCAT GCTCTCGGGTCTGCCCATTCTTGGAGATACCAGCTTCAAATTCACCAACACCAGCAGCAACAATCAGGACAGCAC AGTCAACCTGAGATGTCCCTGTAATCATGTTTTTGATAAAGTCTCTGTGTCCTGGGGCATCAATGATAGTCACAT AGTACTTGCTGGTCTCAAATTTCCACAAGGAGATATCAATGGTGATACCACGTTCACGCTCAGCTTTCAGTTTAT CCAAGACCCAGGCATACTTGAAGGAGCCCTTTCCCATCTCAGCAGCCTCCTTCTCAAATTTTTCAATGGTTCTTT TGTCGATGCCACCGCATTTATAGATCAGATGGCCAGTAGTGGTGGACTTGCCCGAATCTACGTGTCCAATGACGA CAATGTTGATATGAGTCTTTTCCTTTCCCATTTTGGCTTTTAGGGGTAGTTTTCACGACACCTGTGTTCTGGCGG CAAACCCG

ACGGGTTTGCCGCCAGAACACAGGTGTCGTGAAAACTACCCCTAAAAGCCAAAATGGGAAAGGAAAAGACTCATA TCAACATTGTCGTCATTGGACACGTAGATTCGGGCAAGTCCACCACTACTGGCCATCTGATCTATAAATGCGGTG GCATCGACAAAAGAACCATTGAAAAATTTGAGAAGGAGGCTGCTGAGATGGGAAAGGGCTCCTTCAAGTATGCCT GGGTCTTGGATAAACTGAAAGCTGAGCGTGAACGTGGTATCACCATTGATATCTCCTTGTGGAAATTTGAGACCA GCAAGTACTATGTGACTATCATTGATGCCCCAGGACACAGAGACTTTATCAAAAACATGATTACAGGGACATCTC AGGCTGACTGTGCTGCTGATTGTTGCTGCTGGTGTTGGTGAATTTGAAGCTGGTATCTCCAAGAATGGGCAGA CCCGAGAGCATGCCCTTCTGGCTTACACACTGGGTGTGAAACAACTAATTGTCGGTGTTAACAAAATGGATTCCA CTGAGCCACCCTACAGCCAGAAGAGATATGAGGAAATTGTTAAGGAAGTCAGCACTTACATTAAGAAAATTGGCT ACAACCCCGACACAGTAGCATTTGTGCCAATTTCTGGTTGGAATGGTGACAACATGCTGGAGCCAAGTGCTAACA TGCCTTGGTTCAAGGGATGGAAAGTCACCCGTAAGGATGGCAATGCCAGTGGAACCACGCTGCTTGAGGCTCTGG GTATTGGTACTGTTCCTGTTGGCCGAGTGGAGACTGGTGTTCTCAAACCCGGTATGGTGGTCACCTTTGCTCCAG TCAACGTTACAACGGAAGTAAAATCTGTCGAAATGCACCATGAAGCTTTGAGTGAAGCTCTTCCTGGGGACAATG TGGGCTTCAATGTCAAGAATGTGTCTGTCAAGGATGTTCGTCGTGGCAACGTTGCTGGTGACAGCAAAAATGACC CACCAATGGAAGCAGCTGGCTTCACTGCTCAGGTGATTATCCTGAACCATCCAGGCCAAATAAGCGCCGGCTATG CCCCTGTATTGGATTGCCACACGGCTCACATTGCATGCAAGTTTGCTGAGCTGAAGGAAAAGATTGATCGCCGTT CTGGTAAAAAGCTGGAAGATGGCCCTAAATTCTTGAAGTCTGGTGATGCTGCCATTGTTGATATGGTTCCTGGCA TTGCGGTGGGTGTCATCAAAGCAGTGGACAAGAAGGCTGCTGGAGCTGGCAAGGTCACCAAGTCTGCCCAGAAAG CTCAGAAGGCTAAATGAATATTATCCCTAATACCTGCCACCCCACTCTTAATCAGTGGTGGAAGAACGGTCTCAG AACTGT

CCGGCTCGCGCCCTCCGGGCCCAGCCTCCCGAGCCTTCGGAGCGGGCGCCGTCCCAGCCCAGCTCCGGGGAAACG CTGGTACTCCTGGGCTGGGTCTCCTCGTCTTCTCCCACCTCCTCGGCATCCTCCTCTCTCCTCCGGCGCCCGTTC CTGGCTTCCGCCGTGTCCGCCCAGCCCCGCTGCCGGACCAGTGCCCCGCGCTGTGCGAGGTGCTCCGAGGCAGCG $\tt CGCACAGTCAAGTGCGTTAACCGCAATCTGACCGAGGTGCCCACGGACCTGCCCGCCTACGTGCGCAACCTCTTC$ GACCTCAGCCACAACCCACTGGCCGACCTCAGTCCCTTCGCTTTCTCGGGCAGCAATGCCAGCGTCTCGGCCCCC AGTCCCCTTGTGGAACTGATCCTGAACCACATCGTGCCCCCTGAAGATGAGCGGCAGAACCGGAGCTTCGAGGGC ATGGTGGTGGCGGCCCTGCTGGCGGGCCGTGCACTGCAGGGGCTCCGCCGCTTGGAGCTGGCCAGCAACCACTTC CTTTACCTGCCGCGGGATGTGCTGGCCCAACTGCCCAGCCTCAGGCACCTGGACTTAAGTAATAATTCGCTGGTG AGCCTGACCTACGTGTCCTTCCGCAACCTGACACATCTAGAAAGCCTCCACCTGGAGGACAATGCCCTCAAGGTC $\tt CTTCACAATGGCACCCTGGCTGAGTTGCAAGGTCTACCCCACATTAGGGTTTTCCTGGACAACAATCCCTGGGTC$ ${\tt TGCGACTGCCACATGGCAGACATGGTGACCTGGCTCAAGGAAACAGAGGTAGTGCAGGGCAAAGACCGGCTCACC}$ TGTGCATATCCGGAAAAAATGAGGAATCGGGTCCTCTTGGAACTCAACAGTGCTGACCTGGACTGTGACCCGATT $\tt CTTCCCCCATCCCTGCAAACCTCTTATGTCTTCCTGGGTATTGTTTTAGCCCTGATAGGCGCTATTTTCCTCCTG$ GTTTTGTATTTGAACCGCAAGGGGATAAAAAAGTGGATGCATAACATCAGAGATGCCTGCAGGGATCACATGGAA ${\tt GGGTATCATTACAGATATGAAATCAATGCGGACCCCAGATTAACAAACCTCAGTTCTAACTCGGATGTC} \underline{{\tt TGA}}{\tt GAA}$ ATATTAGAGGACAGGACAAGGACAACTCTGCATGAGATGTAGACTTAAGCTTTATCCCTACTAGGCTTGCTCCAC TTTCATCCTCCACTATAGATACAACGGACTTTGACTAAAAGCAGTGAAGGGGATTTGCTTCCTTGTTATGTAAAG TTTCTCGGTGTGTTCTGTTAATGTAAGACGATGAACAGTTGTGTATAGTGTTTTACCCTCTTCTTTTCTTGGAA TACAGTTCAAGGTGTAGCAAGTGTACCCACAGATAGCATTCAACAAAAGCTGCCTCAACTTTTTCGAGAAAAA TACTTTATTCATAAATATCAGTTTTATTCTCATGTACCTAAGTTGTGGAGAAAATAATTGCATCCTATAAACTGC CTGCAGACGTTAGCAGGCTCTTCAAAATAACTCCATGGTGCACAGGAGCACCTGCATCCAAGAGCATGCTTACAT TTTACTGTTCTGCATATTACAAAAAATAACTTGCAACTTCATAACTTCTTTGACAAAGTAAATTACTTTTTTGAT TGCAGTTTATATGAAAATGTACTGATTTTTTTTAATAAACTGCATCGAGATCCAACCGACTGAATTGTTAAAAA AAAAAAAAATAAAGATTCTTAAAAGAA

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 ${\tt MCVFGLLPKQWKQSCCFSGSSTCNSSNTNLKSTLDTVGDSMKEPRRISAVLELIMLQTSHDEMFSHIYKIRETAD} \\ {\tt GLCLEVEGKLVSRTEGNIDDLLIGGNASAEGTESEGKLEEQRPERVKPFMTGAAEQIKHILANFKSYHFFIGENM} \\ {\tt NPDGMVAPQDYQIEVQASDDTERCSGDFGSTRNNENLCQE} \\ {\tt CRUTCH STRUNG STR$

GTGCGAGCCAGAAGGGGAAAGGCGGCCACTCGTGCCTGAGCGACCGCAGAGGGGAGTGGGAGCAGTGGGGTAAAG GAGCGGGGGGCGGAATAAGAAAGGCCGAGAGAAGGCGGACAGAGGCTAGTGGTGGTGGTGGTAGGGGGAGA GAAGGGAAGGGGGGTCACGCGGGGGCGCGCGCGCGCACCGGGAGCGCGCTCGGAGGCGAGTGGAACTGGATCGG GTTTGCTGCCAGCGGCGTGAGCTTCGGCCGCCATTTTACAACAGCTCCACTCGCCGGCACACAGGGAGCAGCGA GCACGCGTTTCCCGCAACCCGATACCATCGGACAGGATTTCTCCGCCTCAGCCCAACGGGGAGATCTCTGGAAAC ${\tt ATGGCTACAGAACATGTTAATGGAAATGGTACTGAAGAGCCCATGGATACTACTTCTGCAGTTATCCATTCAGAACATGTTACTAGAACATGTTAATGGAAATGGTACTGAAGAGCCCATGGATACTACTTCTGCAGTTATCCATTCAGAACATGTTAATGGAAATGGTACTGAAGAGCCCATGGATACTACTTCTGCAGTTATCCATTCAGAACATGTTAATGGAAATGGTACTGAAGAGCCCATGGATACTACTTCTGCAGTTATCCATTCAGAACAACATGTTAATGGAAATGGTACTGAAGAGCCCATGGATACTACTTCTGCAGTTATCCATTCAGAAACAACATGTTAATGGAAATGGTACTGAAGAGCCCATGGATACTACTTCTGCAGTTATCCATTCAGAAACAACATGTTAATGGAAATGGTACTGAAGAACATGTAATGTAATGAAATGGTACTGAAAGAGCCCATGGATACTACTTCTGCAGTTATCCATTCAGAAACAACATGTTAATGTAATGAAACAACATGTAAT$ AATTTCAGACATTGCTTGATGCTGGTTTACCACAGAAAGTTGCTGAAAAACTAGATGAAATTTACGTTGCAGGG CTAGTTGCACATAGTGATTTAGATGAAAGAGCTATTGAAGCTTTAAAAGAATTCAATGAAGACGGTGCATTGGCA GTTCTTCAACAGTTTAAAGACAGTGATCTCTCTCATGTTCAGAACAAAAGTGCCTTTTTATGTGGAGTCATGAAG ACTTACAGGCAGAGAAAAACAAGGGACCAAAGTAGCAGATTCTAGTAAAGGACCAGATGAGGCAAAAATTAAG GCACTCTTGGAAAGAACAGGCTACACACTTGATGTGACCACTGGACAGAGGAAGTATGGAGGACCACCTCCAGAT CTCAATAGAGGTTATGCGTTTGTCACTTTTTGTACAAAAGAAGCAGCTCAGGAGGCTGTTAAACTGTATAATAAT CATGAAATTCGTTCTGGAAAACATATTGGTGTCTGCATCTCAGTTGCCAACAATAGGCTTTTTGTGGGCTCTATT TACCACCAACCGGATGACAAGAAAAAAAACAGAGGCTTTTGCTTTCTTGAATATGAAGATCACAAAACAGCTGCC ${\tt CAGGCAAGGCGTAGGTTAATGAGTGGTAAAGTCAAGGTCTGGGGGAATGTTGGAACTGTTGAATGGGCTGATCCT}$ ${\tt ATAGAAGATCCTGATCCTGAGGTTATGGCAAAGGTAAAAGTGCTGTTTGTACGCAACCTTGCCAATACTGTAACA}$ GAAGAGATTTTAGAAAAGGCATTTAGTCAGTTTGGGAAACTGGAACGAGTGAAGAAGTTAAAAGATTATGCGTTC CAAATGTATGACGATTACTATTATGGTCCACCTCATATGCCCCCTCCAACAAGAGGTCGAGGGCGTGGAGGT AGAGGTGGTTATGGATATCCTCCAGATTATTATGGATATGAAGATTATTATGATTATTATGGTTATGATTACCAT AACTATCGTGGTGGATATGAAGATCCATACTATGGTTATGAAGATTTTCAAGTTGGAGCTAGAGGAAGGGGTGGT AGAGGAGCAAGGGGTGCTCCATCCAGAGGTCGTGGGGCTGCTCCTCCCCGCGGTAGAGCCGGTTATTCACAG AGAGGAGGTCCTGGATCAGCAAGAGGCGTTCGAGGTGCGAGAGGAGGTGCCCAACAACAAGAGGCCGCGGGGTA ${\tt AAGCGGCGCCAGACCAATAATCAGAACTGGGGCTCCCAACCCATTGCTCAGCAACCGCTCCAAGGTGGTGATCAT}$ TCTGGTAACTATGGTTACAAATCTGAAAACCAGGAGTTTTATCAGGATACTTTTGGGCAACAGTGGAAGTAGAAA CAGTAGGGCCTCTGTAAAATTGGAGACTGATAGGTTGATCAGAAACTCACCCTAAATCTGAACGGGTGCCGCTAT AATTTGTGACATCTGGCAAGATTTCCCTTTATGTATATATTTTTAACAATCCGCTTGGACACGAACAAAGCCACAC AGTTAATGAGTTTGCATTTGTGCTTGAGAAAATTTGGCTCAAGTCCATTTGGCTGTAGTGTCAACGATGTTTCCA GTAGTGTTTAGATTTGGTGTCTTCAAAGGTAGTTGATTAAAACCAAGTGTGTCTTTAATATCTTGTATCAGAATA ACTTTGTATGTTACCAACTTAAATTGCTAGAATAAGGTAAATTGATACACAACTGCTATTTTTAATTTAGAACTT TGACCTAATTTGGGTTTTCAAAACCATTTTGGCTACTTGTATTCTTTATGCTGTTGTTTATTTCAATAAAAAATT CACACCT

<u>ATG</u>GCGTGCGGCTTTCGCCGCGCTATTGCTTGCCAGCTTTCCAGAGTGTTGAATCTTCCACCAGAAAACTTGATC ACATCAATATCTGCAGTTCCAATTTCCCAAAAAGAAGAAGTAGCTGATTTTCAGCTTTCTGTGGATTCTTATTG GAAAAAGACAATGACCATTCAAGACCAGATATTCAAGTTCAAGCCAAGAGACTAGCAGAGAAGCTAAGATGTGAT GTGCTACAACAAGTAATTGAAGATGGCTCAAAATATGGATTAAAAAGTGAACTTTTCTCTGGACTTCCCCAGAAG AAGATTGTGGTTGAATTCAGTTCACCTAATGTTGCCAAAAAATTTCATGTTGGACATTTGCGTTCTACCATCATA GGAAATTTTATAGCAAATCTCAAAGAAGCTTTAGGACATCAAGTAATAAGAATAAATTACCTTGGCGATTGGGGC ATGCAGTTTGGTCTTCTGGGAACTGGCTTCCAGCTGTTTGGCTATGAGGAAAAACTGCAGTCCAATCCTCTACAG CATCTCTTTGAAGTTTATGTACAAGTTAATAAAGAAGCAGCAGATGATAAAAGTGTAGCAAAAGCAGCACAGGAG TTCTTCCAACGATTGGAACTGGGCGATGTGCAAGCACTTTCACTGTGGCAAAAATTTCGGGACTTGAGCATTGAA GAGTACATTCGGGTTTACAAGCGTCTGGGAGTATATTTTGATGAATATTCAGGAGAATCATTTTATCGTGAAAAA TCTCAAGAGGTCTTAAAGTTGCTGGAGAGTAAAGGACTCCTACTGAGAACAATAAAAGGAACGGCTGTAGTAGAT $\tt CTCTCTGGGAATGGCGACCCCTCCTCAATTTGTACTGTAATGCGAAGTGATGGGACTTCTCTCTATGCAACCAGA$ GATCTTGCAGCTGCTATAGATCGAATGGACAAGTATAATTTTGATACAATGATATATGTGACAGATAAAGGACAA AAAAAGCATTTTCAGCAAGTATTCCAAATGCTGAAGATCATGGGATATGACTGGGCAGAAAGGTGCCAGCACGTG $\tt CCCTTTGGAGTAGTACAGGGAATGAAGACTCGAAGAGGGAGATGTCACTTTCCTGGAAGATGTTTTAAATGAGATT$ CAATTAAGGATGCTACAGAACATGGCTTCAATTAAGACAACTAAAGAACTCAAGAACCCACAAGAGACTGCAGAG ${\tt AGGGTCGGGCTCGCAGCACTCATTATTCAGGACTTCAAAGGTTTACTCTTATCTGACTACAAGTTCAGCTGGGAT}$ ACTTTTGGATGTGGGTACCTGAATGACTTCAACACTGCTTGTTTACAAGAGCCACAGTCTGTTTCAATTCTTCAG CATCTTCTCAGGTTCGACGAGGTGCTTTATAAATCATCTCAGGACTTTCAACCCAGGCATATCGTCAGTTACCTT CTAACTTTAAGTCATCTTGCAGCTGTGGCACAAAACACTACAAATAAAAGATAGTCCTCCTGAAGTGGCTGGG GCCAGACTTCATCTTTTCAAAGCTGTCCGTTCTGTCCTAGCCAATGGAATGAAACTTCTTGGAATAACACCTGTA TGTAGGATGTAA

MACGFRRAIACQLSRVLNLPPENLITSISAVPISQKEEVADFQLSVDSLLEKDNDHSRPDIQVQAKRLAEKLRCD
TVVSEISTGQRTVNFKINRELLTKTVLQQVIEDGSKYGLKSELFSGLPQKKIVVEFSSPNVAKKFHVGHLRSTII
GNFIANLKEALGHQVIRINYLGDWGMQFGLLGTGFQLFGYEEKLQSNPLQHLFEVYVQVNKEAADDKSVAKAAQE
FFQRLELGDVQALSLWQKFRDLSIEEYIRVYKRLGVYFDEYSGESFYREKSQEVLKLLESKGLLLRTIKGTAVVD
LSGNGDPSSICTVMRSDGTSLYATRDLAAAIDRMDKYNFDTMIYVTDKGQKKHFQQVFQMLKIMGYDWAERCQHV
PFGVVQGMKTRRGDVTFLEDVLNEIQLRMLQNMASIKTTKELKNPQETAERVGLAALIIQDFKGLLLSDYKFSWD
RVFQSRGDTGVFLQYTHARLHSLEETFGCGYLNDFNTACLQEPQSVSILQHLLRFDEVLYKSSQDFQPRHIVSYL
LTLSHLAAVAHKTLQIKDSPPEVAGARLHLFKAVRSVLANGMKLLGITPVCRM

TAATGTTGAAGTCACTGATATATTTTGTTTGACTGCATTCCCTACCCTGCTTCCCTAGAGAGAACTGATCTCAT CCAGTGAAAAGGATAAATGGCATTGTCCATCTCTTTAATGAACTACTGAGTGTTAAGAAGAATATTCTTCTTTTT CTCATGTTGAAACTCAAATTACAACATTTAAAAAATATGTCATTTGGAGGTCAGTGGAGAGGTTTGAATTAGAAG CATGTATTTGGAGTAGTAGAGGAAGCATTGTAGAAGAGGTAAAGAGACCTGGGCTTTTTTCTCAGTCTGTTTTTT TTTGCAGTAGGATTTTAAAGGAGACATTTAGCTTGCCAGACATCAGTTTTCATGTCTATAAAATAAGGTGGCTAG TATAAGAGGAAGAATTTTTTGAGACTAGGTCTTGCTCTGTCACCCAGACTGGAGTGCAGTGGCATGATCTCGGCT $\texttt{CACTGCAACCTCTGCCTCCTGGGTTCAAGCAATTCTCGTGCCTAAGCCTCCCGAGTAGCTGGGCTTACGGGCAC} \underline{\textbf{A}}$ **TGCCACCACGCCTGGCTAATTTTTGTATTTTTAGTAGAGATGGGGTTTTTCCATGTTGGCCAGGCTGGTCTCAAA** $\texttt{TTTTA} \underline{\textbf{TAA}} \texttt{GATGATAAGAAAAACATTCTGAATAAATACTAGGTTATTTCTCATTTTCTTGCTTTTAATTTTGTTT}$ TTTATTTATTTTATTTTATTTTACTTTTTTGAGACAGAGTTTCGCTCTTGTCACCCAGGCTGGAGTGCAGTG GCACAATCTTGACTCGCTGCAGTCTCCACCTCCAGGATTCAAGCGATTCCCCTGCCTCAGTCTCCCAAGCAGCTG CAGGCATGAGCCACCGCTCTCGGCCCCCTTGCTTTTAATTTTGAAAGTACACATAACACCTTCTTCTGGTAAAGG TATGTCTCAATGGAGAACTCATAGTGATTAGTCTTTGTTTAACAACTAATGCTTTTAAGGTAACAGTTCTATCTC GTTTCGATGTCTGTGTGTAGAGAAGTAGCTGATTTTCAGCTTTCTGTGGATTCTTTATTGGAAAAAGACAATGAC CATTCAAGACCAGATATTCAAGTTCAAGCCAAGAGACTAGCAGAGAAGGTACGTTAGCACTATTATCTCTTTTTG ACATTGTAATAAACTTGTTATTAAAAAAAGTACTTTGCAGGCTATCTCAGCCATAATAGTGAATTTAATAGTGTT TCTTTGAGGCATCTTGTGTAATATAATTTAAATTCATTTTAGCCATGTACTATAAGGTTATAATGATTTTTCAGA TTAGTTATAAAGCACTCCTCTTGAGCTGACATTGTTCAATTTTTTGATTAACCACTTACAGGAAGACTGAAGTGT TAATTAAATTTACAGATTGAAGCTGG

 ${\tt MPPRLANFCIFSRDGVFPCWPGWSQTPDLKWSTCLGLPKCWDLCPDRRGRIL}$

2262/6881 FIGURE 2079A

GATTGCCCCCTGTGGGTCACTTTCTCAGTCATTTTGAGCTCAGCCTAATCAAAGACTGAGGTTATGAAGTCGATC CTAGATGGCCTTGCAGATACCACCTTCCGCACCATCACCACTGACCTCCTGTACGTGGGCTCAAATGACATTCAG TACGAAGACATCAAAGGTGACATGGCATCCAAATTAGGGTACTTCCCACAGAAATTCCCTTTAACTTCCTTTAGG GGAAGTCCCTTCCAAGAGAAGATGACTGCGGGAGACAACCCCCAGCTAGTCCCAGCAGACCAGGTGAACATTACA GAATTTTACAACAAGTCTCTCTCGTCCTTCAAGGAGAATGAGGAGAACATCCAGTGTGGGGAGAACTTCATGGAC ATAGAGTGTTTCATGGTCCTGAACCCCAGCCAGCAGCTGGCCATTGCAGTCCTGTCCCTCACGCTGGGCACCTTC ACGGTCCTGGAGAACCTCCTGGTGCTGTGCGTCATCCTCCACTCCGCAGCCTCCGCTGCAGGCCTTCCTACCAC TTCATCGGCAGCCTGGCGGTGCCAGACCTCCTGGGGAGTGTCATTTTTGTCTACAGCTTCATTGACTTCCACGTG GGCAGCCTGTTCCTCACAGCCATCGACAGGTACATATCCATTCACAGGCCCCTGGCCTATAAGAGGATTGTCACC AGGCCCAAGGCCGTGGTGGCGTTTTGCCTGATGTGGACCATAGCCATTGTGATCGCCGTGCTGCCTCTCCTGGGC ATCGGGGTCACCAGCGTACTGCTTCTGTTCATCGTGTATGCGTACATGTATATTCTCTGGAAGGCTCACAGCCAC GCCGTCCGCATGATTCAGCGTGGCACCCAGAAGAGCATCATCATCCACACGTCTGAGGATGGGAAGGTACAGGTG ACCCGGCCAGACCAAGCCCGCATGGACATTAGGTTAGCCAAGACCCTGGTCCTGATCCTGGTGGTGTTGATCATC TGCTGGGGCCCTCTGCTTGCAATCATGGTGTATGATGTCTTTGGGAAGATGAACAAGCTCATTAAGACGGTGTTT GCATTCTGCAGTATGCTCTGCCTGCAGCTCCACCGTGAACCCCATCATCTATGCTCTGAGGAGTAAGGACCTG CGACACGCTTTCCGGAGCATGTTTCCCTCTTGTGAAGGCACTGCGCAGCCTCTGGATAACAGCATGGGGGACTCG GACTGCCTGCACAAACACGCAAACAATGCAGCCAGTGTTCACAGGGCCGCAGAAAGCTGCATCAAGAGCACGGTC AAGATTGCCAAGGTAACCATGTCTGTGTCCACAGACACGTCTGCCGAGGCTCTGTGAGCCTGATGCCTCCCTGGC AGCACAGGAAAAGAATTTTTTTTTTAAGCTCAAAATCTAGAAGAGTCTATTGTCTCCTTGGTTATATTTTTTTA ACTITACCATGCTCAATGAAAAGGTGATTGTCACCATGATCACTTATCAGTTTTGCTAATGTTTCCATAGTTTAGG TACTCAAACTCCATTCTCCAGGGGTTTACAGTGAAGAAAGCCTGTTGTTTAAGTGACTGAACGATCCTTCAAAGT CTCAATGAAATAGGAGGGAAACCTTTGGCTACACAATTGGAAGTCTAAGAACCCATGGAAAAATGCCATCAAATG AATAATGCCTTTGTAACCACAACTTTCACTATAATGTGAAATGTAACTGTCCGTAGTATCAGAGATGTCCATTTT TACAAGTTATAGTACTAGAGATATTTTGTAAAATGTATTATGTCCTGTGAGATGTGTATCAGTGTTTATGTGCTA TTAATATTTGTTTAGTTCAGCAAAACTGAAAGGTAGACTTTTATGAGAACAATGGACAAGCAGTGGATACGTGTC AATGTGTGCACTTTTTTCTATATTATTGCCCATGATATAACTTTAGAAATAAACCTTAATATTTCTTCAAATAT CTCTATTTAATTTTGACACTGAAATAACCGTAAAGGTTTATTTTTCTGTTACCTCAACAAGAAGAATTTGAAGAC TTCAAAATATTGAGCAGAATTCATTCATACTTAAAAATTTATTAGCCCTGCATTTTCATAGGAAGACACATTATC ATCTCTGACTTTCTTTAGCTCTTTAGCTATTACTGGATCTCTTAAGACAGCATGTGTTAATCTTAATGTATATCGT TATCACTGTGCAGTTGCTGTTTACTTGAATAGTATTGTGTTCCTATATTCCAGGTTTAAGTAGATTTCATGCCTG GGTGGCCAAACAACAGTCTTCATTTTTTTAATTGAAAAGAAGTAGTGTCTGGATCAGTAAAATTATACTGTGTG TGAGTGTGAATATAAATGTGTGTATGTGTGTTTTCTGTCCTGTAACTGTTACAGTAATGTCATAAAGTGAGAAAAC TGTGACCAAGTATAAACTTTTACCACTTGCTGCACTCTTGCACATGGATTCAGTTTCTAAAATTGAGTTCTTCCT GTAATCTTGTTGATAAAAATACTGACTCCAACCATTCAAAAATTTCACCCCATCCCTCATAAGAGATTGGATCA AGTATTACTAAATTGACCTTTAGGTATTACACAAGACCAGTGCTTAGCAAAAAATAATGACAGGCATCCAAGGAA GGGATGTATTTGTAGTGTTATTGCCAGGAAAGGAGAGTACTTTGGTTTCTGAGCACCGAATATTGAGCAATATGT CAGTCACTAAAAGGAAGACAGTTCTACAGAAAAACAATGGTAACATTTTTCAATAGCGTGTGTAGATAGTATGCA CTATATACATCACGTTAAAGTAGGACTATCACACCCAGCCCATGTGGCTAAAAAAGCTGAATCAGACAGTGGATG AGACACAACGGCAGTGAAGAACCGATACACTTGGCATTGACGTCTAGCTATGCTGTATCTGTGCTTTGCCCAC ATGCCCTTGGTGACAGCTGAGCACCCAGCTCTGTCTTGGTAGGTTTGGGCTAAGGAACAAATCTCTCCTTTGCTC GTGGTTAGCAAGATACACTCAAGCATGAAGATAAACACAGCTGCTTTCTTCTTACACCCCGGTCTCATGCTCCTT AATGGCGCCATGGGTGCTTGTTGGGCCTTTTTCCAGTAAGGAATGATATTGCTGAAGAATCTACTTAACCCTGAC AAATTTTAATTATAATCTCTTCTTATACAGATAAAACATGACTCCTACAAGGCCCCAAGGTTTACATAGTCTGAA GTGAAGTACAGAGCTGGCATCTATCTGGTGATTTCTAGCTCTCGAGATACCCAAGCAGCCTGATGGGGCAGTTCC

2263/6881 FIGURE 2079B

TCTGCCTGCTGGCTCCCTTACTTTACCTCTCTGTCATGTGCAGATGAAGGCTCAGGGTGCTAGAGGATTAGTAAG ATCTCTTTCTAAAGACAGGAGAGATTATTTACAAGAAGAACTCACCAGGGTTTAGTTTGCATTTAAGAATTGCCA GTCTTTTGTCCTGCATCATCTTGAACATTAATCCACATGTTTCAGAGCTCACCAGGCAGTACCAATGCTCTTTTC ACAGCTATGAAGAGCTAGAGAAATTCTTGTTATGGTAGAAAAATTTCACGATTCATTTTTGAAACTGCATTTGTG CGTATGCAGTGTAGATTTTATAGTGTGTTGTGCTTTCAAGATCTAAATCATATATAAATTAAAGTGACAATGG GGCTGACAGCACTAAACTTGGTGCTTATTGATATTCTAAGAAATATCTGTGAAATATCATCACGTATGTTATACA ACCTTCATTTAAAAAGGTTTAAAACTAGTTAGATTCACTTTGACACTTTCATATCATTTCTTAACCCAAGTGAC TAGATCCATTAATTTAAATGATTTAAATTTAAGTAAGTTTTATAAGGTCTGACATCAGAGGTATCTTACTTTCCT CTGAGGATGATGTACTTGCCCTGACCATGCATTTTACCATCACACATGTTCAGAAAGGGCCAAATTCCCAACCTG CTCATTTTTTTTTTTTATCAGAGTCATGATGAATCAGTCCTAGAATGTTTCATTTGCACAAGTAGGGCTGCCTCCAA GAGGAACCTCTGATTTATTTTGTATGAAATATATGTGAAAGGATATGAATCTGAGAGATGCTGTAGACATCTGTC CTACACTTGAGATGATTTCCAAGCCTCTCTGGCACTTTGAGTTAAGTCTATCTGGTATTAAATGCCAAGGACCTT TTGCTGCCTAAATCCACTCTGCAGGAAATAGGCCCAACCACCAGATGAGAATTAGGCCCTGGATGAGTAGCGCTA TAGTTACTGTCCTGTTGATTAATTTCTGCCATTTCATGTCCATAAAAGAGACCACCCATATCATGCACACAATTA GATTTCTCACACTCTAACTGTATATTTGTATGATATTTTAAAATCTCCTAAATGCTGGGCAATGGCTATTAACAA CTGATTTGGGCTGAATGTATGTAAATAGGTTTCTAAAAAGTCAGATGTTTGAGCAGTGGCCTACAAATCAGTAAT TTTCGGATGGGAGAGTTTCTTTACATTGCCGTGGCATCTTAAAAGCTATCTTCATGTAAATTGACTGTACTAGGC GCGGGAAACATGACTCTTTATTGTCTGTAAATCTAACATTATTACTTTTCCTCTTAGAAGAATATTGTATTGTTA GATGTTTGTTGAGCTGGTAACATCGTTGCAACCACTGCAATATCTTCGTTAGTAATCTGTATAATACTTTGTATA CAAGTACTGGTAAGATTGTTATTAAATGTAGCTTCAGTCATTAAATTACTATAGCAAAGTAGTACTTCTTCTGTA ATATTTACAATGTATTAAGCCCACAGTATATTTTATTTCAATGTAATTAAACTGTTAACTTATTCAAAGAGAAAA CATCTCATCATGTCTATTGTCCAAAGTTACCTGGAATCAAATAAAAATTCTAGATTACCATGAAGAACATA

GCAAGCTGTGTTCCATGGCAGGGAACTTTTGGCAGAGCTCCCACTATTTGCAATGGATTTTGGATAAACAAGATC ${\tt TGTTGAAGGAGCGCCAAAAGGATTTAAAGTTTCTCTCAGAGGAAGAATATTTGGAAGTTACAAATATTTTTTACAA}$ ATGTTATCCAAGCATTAGGTGAACATCTTAAATTAAGACAACAAGTTATTGCCACTGCTACGGTATATTTCAAGA GATTCTATGCCAGGTATTCTCTGAAAAGTATAGATCCTGTATTAATGGCTCCTACATGTGTTTTTTTGGCATCCA CATATGCCTTTCCAAAGGAATTTCCTTATAGGATGAATCATATATTAGAATGTGAATTCTATCTGTTAGAACTAA TGGATTGTTGCTTGATAGTGTATCATCCTTATAGACCTTTGCTCCAGTATGTGCAGGACATGGGCCAAGAAGACA TGTTGCTTCCCCTTGCATGGAGGATAGTGAATGATACCTACAGAACGGATCTTTGCCTACTGTATCCTCCTTTCA TGATAGCTTTAGCTTGCCTACATGTAGCCTGTGTTGTACAGCAGAAAGATGCCCAGGCAATGGTTTGCTGAGCTTT CTGTGGATATGGAAAAGATTTTGGAAATAATCAGGGTTATTTTAAAACTATATGAGCAGTGGAAGAATTTCGATG AGAGAAAAGAGATGGCAACCATTCTTAGTAAGATGCCAAAACCAAAACCACCTCCAAACAGTGAAGGAGAGCAGG GTCCAAATGGAAGTCAGAACTCTAGCTACAGCCAATCTTAAAACATTCCGAAGAATTCCATAGTGGACCACTTGG AAATAAACCATTGGACAGATTTCAGTAATGTCTTCAGTGGAACACAAATGAAAATGAATAGCTTGTTTCTGTCAA GCATATTGGAAAGTGATTTTATTTTTGCAAAATAAGTTTTTCTTTAATATGATTCTAGTACATAATTGATTAAAA AGCTTTTGATTAGTATATTTCTTAATTTTGGATAATAAAAATTGTAGCTTTTTATTAAGCCAGGAAACATGAA GCATAATTTGTTTAAAATTCTCTTTGGTCATTGAGGGACCAAAAAAGGACGTAAAATTTACAGTCAATCTATGAG GGTTTTTTTCCCTCCATAAGTTTAACTTTAAAACTGTATTTAAGGAATCAAATCTTACAAAATCCTGGAAGATTT TGGTAATGATGTTGATAATTTCAGGGAAATTAATCAAGTACCTATATTGATTTAAAAGTGTATTTTATTCAGTAG TTTGAGG.

AGTCTCCCCAGGTTGTAGACGCTGCGGCCCGGCCGGCGGGTAAATAACAG<u>ATG</u>CGGGTGAAAGATCCAACTAAA GCTTTACCTGAGAAAGCCAAAAGAAGTAAAAGGCCTACTGTACCTCATGATGAAGACTCTTCAGATGATATTGCT GTAGGTTTAACTTGCCAACATGTAAGTCATGCTATCAGCGTGAATCATGTAAAGAGAGCAATAGCTGAGAATCTG TCCAGAACAGAGCCCCATTGTATTATTAATTAATCTGAGCACATGGATTATATGGTGTTATGAATGTGATGAAAAA TTATCAACGCATTGTAATAAGAAGGTTTTGGCTCAGATAGTTGATTTTCTCCAGAAACATGCTTCTAAAACACAA ACAAGTGCATTTTCTAGAATCATGAAACTTTGTGAAGAAAATGTGAAACAGATGAAATACAGAAGGGAGGAAAA TGCAGAAATTTATCTGTAAGAGGAATTACAAATTTAGGAAATACTTGCTTTTTTAATGCAGTCATGCAGAACTTG TCAGACTCTCAGCTGGACCCATTGGTGGTAGACTTTCAAGGCCTGGACCACTGACCTCAGCCTTGTTCCTGTTT CTTCACAGCATGAAGGAGACTGAAAAAGGACCACTTTCTCCTAAAGTTCTTTTTAATCAGCTTTGTCAGAAGCGG GTGCATCTACATTTAATATAATAATTATGAGTTACAAAATACTAATGTATTCATCATTTAACATGAATAGTCGT TTTTACTGTAACTTTGCTCTTATTGCCCTGACTATGAAGAGAACTAAAATTTGTTACAGCTCTATGCTTTATGAA AATTATATCTCAGTCCTCAGAAGAAGCAGCTTATCCTCATATATAAGGAAATGGAGACACAGAAATTAAATGGCT CACCTAGTCTGAGTGAAAAGCTGAGAATCAAATGGAGATCTGTCCTGACTTGGATGCCTATGTTGTAATACCATA AAGTGAGAAAACCATAGAGTTGTAAAATCTAGAAAGTACCGTAAGATAACATCTAATCTAGCTTTCTTATTTTAA AAGATGAGCTGTGAGGCAAATAGAGTTTAAGTGAATTTCTCAAGGTATTACAGTATGTTTAAAAAACCAAATCCTT

MRVKDPTKALPEKAKRSKRPTVPHDEDSSDDIAVGLTCQHVSHAISVNHVKRAIAENLWSVCSECLEERRFYDGQ LVLTSDIWLCLKCGFQGCGKNSESQHSLKHFKSSRTEPHCIIINLSTWIIWCYECDEKLSTHCNKKVLAQIVDFL QKHASKTQTSAFSRIMKLCEEKCETDEIQKGGKCRNLSVRGITNLGNTCFFNAVMQNLAQTYTLTDLMNEIKESS TKLKIFPSSDSQLDPLVVELSRPGPLTSALFLFLHSMKETEKGPLSPKVLFNQLCQKRVHLHLI

$$\label{thm:construction} $$ \begin{align} MGQLDGKVIILTAAAQGIGQAAALAFVREGAKVIATDINVSKLQELEKYLGIQTRVLDVTKKKQIDQFANEVERL DVLFNVAGFVHHGTVLDCEEKDWDFSMNLNVRSTYLMIKAFLPKMLAQKSGNIITMFSVVSSIKGVVNRCVYSTT KAAVIGLTKSVAADFIQQGIRCNCVCPGTVDTPSLQERIQARGNPEEARNDFLKRQKMGRFATAEEIAMLCVYVA SDESAYVTGNPVIIDGGWSL $$ \end{align}$$

<u>ATG</u>AATGCTATAAAGAGATTTCAGGATGGAAAATTAGTACAGAACAAAGCCTACTGTGGAGAATCAACACCACAG CATTTCACAGGCCTGCAGCCTTATGTGGTTAGCATGGATGAGGGTTCTTCAGGTTTCATGAGAATAGGCTATGAA CACTGGGTTTTGGTCTTCTTGATTCTCAGTGCCTGGATACCAGAAAAAGAGAAATATGAGATTGCAGAGCAGCCC AAGATTGATCAGAAAAGTTTTACCAAAAATTTACCAAAAATCAAAAGTATTCCTCAGCTCCAGTGCTACCTG CGATCTGTGTTTTGCTCTGACGAATGGAATTTATCCTCACAAATTGGTGTTT<u>TAA</u>

 ${\tt MNAIKRFQDGKLVQNKAYCGESTPQHFTGLQPYVVSMDEGSSGFMRIGYEHWVLVFLILSAWIPEKEKYEIAEQPKIDQKAVDSQILFKIKSIPQLQCYLRSVFALTNGIYPHKLVF}$

FIGURE 2087

MAEDCRKCRRVKCVSYAFYLNADIRVPLSSLKNILTPKYYLHIAAPFHLAAVQNEAVVISGRKLAQQIKQKVRQE VEEWVASGNKPEHDPVPAAIVPAKKMTSCRQEGSSPEGSCPESHRLEAVPPLKAQKFQKQRAQKACCPKASGKKA LRGYYKSSKGSNNFKDKNDVFSSLVTSGFLDQISGRSDQVQPHPSSRLLVLSIPIMENLSVVGGLGNTVFKDQWI SSLKTRQQLPAFVIFLSLEEHLILTTKN

FIGURE 2089

AACAGGAAGCGCCCCTCCCGGCTTCGGAGCCGCCCACTCATCTCTGCCCAGCTGCTGCCCTCCCCAGGAGGC CTCCATGGCTTCACCTACCTCCACCAACCCAGCGCATGCCCACTTTGAGAGCTTCCTGCAGGCCCAGCTGTGCCA GGACGTGCTGAGCAGCTTCCAGGAGCTGTGTGGGGCCCTGGGGCTGGAACCCGGTGGGGGGCTGCCCCAGTACCA TGTCTACCAGCAGGGCCGGGCCTGCACCAGCACCAAGTGCCTGGTGGTGGTGCTGGACCTTGCGGGCTGCGGGT CGCTGTGGAGCTGGCGCTGCTGGGGGCCCGAGTGGTGCTGGTGGAAAAGCGCACCAAGTTCTCTCGCCACAACGT GCTCCACCTCTGGCCCTTCACCATCCACGACCTGCGGGCACTCGGTGCTAAGAAGTTCTACGGGCGCTTCTGCAC CGGCACCCTGGACCACATCAGCATCAGGCAGCTCCAGCTGCTTCTGCTGAAGGTAGCATTGCTGCTGGGGGTGGA ACCCAACCCCCTGCCCAGCTGGCCAACTATGAATTTGACGTCCTTATCTCGGCTGCAGGAGGTAAATTCGTCCC TGAAGGCTTCAAAGTTCGAGAAATGCGAGGCAAACTGGCCATTGGCATCACAGCCAACTTTGTGAATGGACGCAC CGTGGAGGAGACACAGGTGCCGGAGATCAGTGGTGTAGCCAGGATCTACAACCAGAGCTTCTTCCAGAGCCTTCT CAAAGCCACAGGCATTGATCTGGAGAACATTGTGTACTACAAGGACGACACCCACTACTTTGTGATGACAGCCAA GAAGCAGTGCCTGCTGCGGCTGGGGGTGCTGCGCCAGGACTGGCCAGACACCAATCGGCTGCTGGGCAGTGCCAA TGTGGTGCCCGAGGCTCTGCAGCGCTTTACCCGGGCAGCTGCTGACTTTGCCACCCATGGCAAGCTCGGGAAACT AGAGTTTGCCCAGGATGCCCATGGGCAGCCTGATGTCTCTGCCTTTGACTTCACGAGCATGATGCGGGCAGAGAG TTCTGCTCGTGTGCAAGAAGCATGGCGCCCCGCCTGCTGCTGGGACCTGCTGGGGGGACTGCCTGGTGGAGCCCTT $\tt CTGGCCCCTGGGCACTGGAGTGGCACGGGGCTTCCTGGCAGCCTTTGATGCAGCCTTGATGGTGAAGCGGTGGGC$ AGAGGGCGCTGAGTCCCTAGAGGTGTTGGCTGAGCGTGAGAGCCTGTACCAGCTTCTGTCACAGACATCCCCAGA AAACATGCATCGCAATGTGGCCCAGTATGGGCTGGACCCAGCCACCCGCTACCCCAACCTGAACCTCCGGGCAGT GACCCCCAATCAGGTACGAGACCTGTATGATGTGCTAGCCAAGGAGCCTGTGCAGAGGAACAACGACAAGACAGA TACAGGGATGCCAGCCACCGGGTCGGCAGGCACCCAGGAGGAGCTGCTACGCTGGTGCCAGGAGCAGACAGCTGG GTACCCGGGAGTCCACGTCTCCGATTTGTCTTCCTCCTGGGCTGATGGGCTAGCTCTGTGTGCCCTGGTGTACCG GCTGCAGCCTGGCCTGCAGACCCTCAGAGCTGCAGGGGCTGGGAGCTCTGGAAGCAACTGCTTGGGCACTAAA GGTGGCAGAGAATGAGCTGGGCATCACACCGGTGGTGTCTGCACAGGCCGTGGTAGCAGGGAGTGACCCACTGGG CCTCATTGCCTACCTCAGCCACTTCCACAGTGCCTTCAAGAGCATGGCCCACAGCCCAGGCCCTGTCAGCCAGGC CTCCCCAGGGACCTCCAGTGCTGTATTATTCCTTAGTAAACTTCAGAGGACCCTGCAGCGATCCCGGGCCAAGGA AAATGCAGAGGATGCTGGTGGCAAGAAGCTGCGCTTGGAGATGGAGGCCCGAGAACCCCAAGTACTGAGGTGCCACC TGACCCAGAGCCTGGTGTACCCCTGACACCCCCATCCCAACACCAGGAGGCCGGTGCTGGGGACCTGTGTGCACT TTGTGGGGAACACCTCTATGTCCTGGAACGCCTCTGTGTCAACGGCCATTTCTTCCACCGGAGCTGCTTCCGCTG CCATACCTGTGAGGCCACACTGTGGCCAGGTGGCTACGAGCACCCAGGAGATGGACATTTCTACTGCCTCCA GCACCTGCCCAGACAGACCACAAAGCGGAAGGCAGCGATAGAGGCCCTGAGAGTCCGGAGCTCCCCACACCAAG TGAGAATAGCATGCCACCAGGCCTCTCAACTCCCACAGCCTCGCAGGAGGGGGGCCGGTCCTGTTCCAGATCCCAG CCCGGAAATGGAGCCTCCACCCAAGCCTCCCCGCAGCTGCTCCGCCTTGGCCCGCCACGCCCTGGAGAGCAGCTT ${\tt TGTGGGCTGGGGCCTGCAGTCCAGGCCCTCAAGCTCTTGTGGCCATGGAGAAGGAGGAAAAAGAGAGTCCCTT}$ CTCCAGTGAAGAGGAAGAAGATGTGCCTTTGGACTCAGATGTGGAACAGGCCCTGCAGACCTTTGCCAAGAC CTCAGGCACCATGAATAACTACCCAACATGGCGTCGGACTCTGCTGCGCCGTGCGAAGGAGGAGGAGGAGAAGAA GTTCTGCAAGGCCCAGACCATCCAACGGCGACTAAATGAGATTGAGGCTGCCTTGAGGGAGCTAGAGGCCGAGGG CGTGAAGCTGGAGCTGGCCTTGAGGCGCCAGAGCAGTTCCCCAGAACAGCAAAAGAAACTATGGGTAGGACAGCT GCTACAGCTCGTTGACAAGAAAAACAGCCTGGTGGCTGAGGAGGCCCGAGCTCATGATCACGGTGCAGGAATTGAA TCTGGAGGAGAAACAGTGGCAGCTGGACCAGGAGCTACATGAACCGGGAAGAAAACCTAAAGACAGC TGCTGATCGGCAGGCTGAGGACCAGGTCCTGAGGAAGCTGGTGGATTTGGTCAACCAGAGAGATGCCCTCATCCG CTTCCAGGAGGAGCGCAGGCTCAGCGAGCTGGCCTTGGGGACAGGGGCCCAGGGCTAGACGAGGGTGGGCCGTCT GCTTTCGTTCCCACAAAGAAAGCACCTCACCCCAGCACAGTGCCACCCCTGTTCATCTGGGCTGCCTGGCAGAGA GCCTTGCTGTTTACAATTAAAATGTTTCTGCCAC

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GTTCCGGCGCACGTAATCGCCGAGGGCACGTGCATGCCCCCTGGTTAAGAGTTGCAGGTAGCGGTAGCGATGGAC ACTCTGGATCGAGTAGTAAAGCCCAAAACGAAAAGAGCCCAAGAGATTCCTTGAGAAGAGAGAACCGAAACTCAAT GAAAATATTAAAAATGCCATGCTGATTAAAGGGGGGAAATGCAAATGCAACAGTGACAAAAGTACTTAAAGATGTG TATGCACTGAAAAAACCATACGGTGTACTATATAAAAAGAAAAATATTACAAGACCTTTTGAGGATCAGACATCA CTGGAATTCTTTTCAAAGAAGTCAGATTGTTCTTTATTCATGTTTGGCTCCCATAATAAGAAGCGGCCAAATAAT CTAGTAATAGGTCGTATGTATGACTACCATGTGCTGGATATGATTAGATATTGAGAATTTTGTCTCTCTA AAAGACATTAAGAACAGTAAATGTCCTGAGGGAACAAAACCCATGCTGATATTTGCTGGCGATGATTTCGATGTA ACAGAAGATTATAGAAGACTAAAAAGTCTTCTTATTGATTTCTTCAGAGGCCCCACAGTATCAAATATCCGCCTG GCTGGATTAGAGTATGTTCTGCACTTCACTGCACTGAATGGGAAGATTTACTTTCGAAGCTATAAGTTGCTGTTG AAGAAATCTGGTTGCAGAACACCACGGATTGAATTGGAAGAGATGGGACCCTCATTGGATCTGGTTCTGAGGAGG AATATTTCCCATGATACTTTTGGTACAACTTATGGAAGGATTCATATGCAGAAGCAAGACCTAAGCAAACTACAA ACCAGGAAAATGAAGGGGTTGAAGAAGCGACCTGCAGAAAGGATAACAGAAGACCACGAGAAAAAGTCAAAAAGA ${\tt ATTAAAAAAAT} \underline{{\tt TGA}} {\tt TGGAACTTAGCCAGCCACTACTGTTTCATTGTGTTCTACTTAAGAGAATTATCAAGCGTC$ AATCCATTCAGAGTTTCTTATAAGATCTTATTATATATTTTTATAACATGATAATTTTACGATATATTATGA ACAGTAATATACTAGTATTAAGTGTAAAGTAAGCCTTTTATTTGAGACATTACACCCTGGTGTGCCATTTTCTCT CAATCTCAGTATGAATTACCTGGAAAGTTAACCTCCTCTCCCAACATGGATCTACATTCTGATTTTTATTTTCTA CTTTTATTTTGCCTGAAATCCTACTCGTTGACATTTGAGATTTTAAGCTTTGTGGCTGAAAATATATAGATCTCT GAG

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2277/6881 FIGURE 2093

MDTLDRVVKPKTKRAKRFLEKREPKLNENIKNAMLIKGGNANATVTKVLKDVYALKKPYGVLYKKKNITRPFEDQ TSLEFFSKKSDCSLFMFGSHNKKRPNNLVIGRMYDYHVLDMIELGIENFVSLKDIKNSKCPEGTKPMLIFAGDDF DVTEDYRRLKSLLIDFFRGPTVSNIRLAGLEYVLHFTALNGKIYFRSYKLLLKKSGCRTPRIELEEMGPSLDLVL RRTHLASDDLYKLSMKMPKALKPKKKKNISHDTFGTTYGRIHMQKQDLSKLQTRKMKGLKKRPAERITEDHEKKS KRIKKN

FIGURE 2094

MEQYICKRTSDGIYIINLKRTWEKLLLAAHAIAAIENPADVSVISSRNIGQRAVLKFAAATGATPIAGRFTPGTF TNQIQAAFWEPRLLVVTDPRADHQPLTEASYVNLPTIALFSLCYVDIAIACNNKGAHSVGLMWWTPAREVLRMRG TISCEHPWEVMPDLYFYRDPEEIEKEEQAAAKKAVTKKEFQGEWTASAPEFTATQPEVADWSEGMQATEWVKAIT EWVEATAEWS WO 2004/030615 PCT/US2003/028547

2280/6881 FIGURE 2096

 ${\tt MAKEDNRRPSREWNPENQGTFLYTQVNGKVEYFLKWKGFTDADNTWEPEENLDCPELIEAFLSSQKAGKQKDDSS} \\ {\tt GELMFLMKWKDSDEADLVLAKEASMKCPQIVIAFYEERLTWHSCPEDEAQ}$

ACAAAAAGCTTTTACGAGGTATCAGCACTTTTCTTTCATTAGGGGGAAGGCGTGAGGAAAGTACCAAACAGCAG CGGAGTTTTAAACTTTAAATAGACAGGTCTGAGTGCCTGAACTTGCCTTTTCATTTTACTTCATCCTCCAAGGAG TTAGGCAAACTCCTTGACAAGGTTCAAGCCTACTCAACTGCTGGAGGGAAGGTGTGGCTGTCAGTACTTTCATT TTCCGAATCCTGCTGCTGGGGACAGCGGTTGAGTCAGCCTGGGGAGATGAGCAGTCTGCCTTTCGTTGTAACACT CAGCAACCTGGTTGTGAAAATGTCTGCTATGACAAGTCTTTCCCAATCTCTCATGTGCGCTTCTGGGTCCTGCAG AACAAGAAAGAGAAGAACTCAAGGTTGCCCAAACTGATGGTGTCAATGTGGACATGCACTTGAAGCAGATTGAG ATAAAGAAGTTCAAGTACGGTATTGAAGAGCATGGTAAGGTGAAAATGCGAGGGGGGTTGCTGCGAACCTACATC ATCAGTATCCTCTTCAAGTCTATCTTTGAGGTGGCCTTCTTGCTGATCCAGTGGTACATCTATGGATTCAGCTTG AGTGCTGTTTACACTTGCAAAAGAGATCCCTGCCCACATCAGGTGGACTGTTTCCTCTCTCGCCCCACGGAGAAA ACCATCTTCATCATCTTCATGCTGGTGTCCCTTGGTGTCCCTTGGCCTTGAATATCATTGAACTCTTCTATGTT TTCTTCAAGGGCGTTAAGGATCGGGTTAAGGGAAAGAGCGACCCTTACCATGCGACCAGTGGTGCGCTGAGCCCT GCCAAAGACTGTGGGTCTCAAAAATATGCTTATTTCAATGGCTGCTCCTCACCAACCGCTCCCCTCTCGCCTATG GAGCAAAACTGGGCTAATTACAGTGCAGAACAAAATCGAATGGGGCAGGCGGGAAGCACCATCTCTAACTCCCAT GCACAGCCTTTTGATTTCCCCGATGATAACCAGAATTCTAAAAAACTAGCTGCTGGACATGAATTACAGCCACTA GCCATTGTGGACCAGCGACCTTCAAGCAGAGCCAGCAGTCGTGCCAGCAGCAGACCTCGGCCTGATGACCTGGAG ATC<u>TAG</u>ATACAGGCTTGAAAGCATCAAGATTCCACTCAATTGTGGAGAAGAAAAAAGGTGCTGTAGAAAGTGCAC CAGGTGTTAATTTTGATCCGGTGGAGGTGGTACTCAACAGCCTTATTCATGAGGCTTAGAAAACACAAAAGACATT AGAATACCTAGGTTCACTGGGGGTATATGGGGTAGATGGGTGGAGAGGGGGGATAAGAGAGGTGCATGTTGGT TCTCCCCGCAAACACCCCTAAGAATGGTTCTGTGTATGTGAATGAGCGGGTGGTAATTGTGGCTAAATATTTTTG AAGACAGAGGATTGTCCTTAAGTCCCTGCTAAAACATTCCATTGTTAAAATTTGCACTTTGAAGGTAAGCTTTCT AGGCCTGACCCTCCAGGTGTCAATGGACTTGTGCTACTATATTTTTTTATTCTTGGTATCAGTTTAAAATTCAGA GTTGGGATGTCACTTAACATTTTTTTTTTTGAGCTAAAGTCAGGGAATCAAGCCATGCTTAATATTTAACAATC ACTTATATGTGTGTCGAAGAGTTTGTTTTGTTTGTCATGTATTGGTACAAGCAGATACAGTATAAACTCACAAAC ACAGATTTGAAAATAATGCACATATGGTGTTCAAATTTGAACCTTTCTCATGGATTTTTGTGGTGTGGGCCAATA TGTATCCTATTATGGATACTGGTTTTGTTAATTATGATTCTTTATTTTCTCTCCTTTTTTTAGGATATAGCAGTA ATGCTATTACTGAAATGAATTTCCTTTTTCTGAAATGTAATCATTGATGCTTGAATGATAGAATTTTAGTACTGT AAACAGGCTTTAGTCATTAATGTGAGAGACTTAGAAAAAATGCTTAGAGTGGACTATTAAATGTGCCTAAATGAA TTTTGCAGTAACTGGTATTCTTGGGTTTTCCTACTTAATACACAGTAATTCAGAACTTGTATTCTATTATGAGTT TAGCAGTCTTTTGGAGTGACCAGCAACTTTGATGTTTGCACTAAGATTTTATTTGGAATGCAAGAGAGGTTGAAA GAGGATTCAGTAGTACACATACAACTAATTTATTTGAACTATATGTTGAAGACATCTACCAGTTTCTCCAAATGC CATTGCATGTAATGTAGACCTAGTCCATCAGATCATGTGTTCTGGAGAGTGTTCTTTATTCAATAAAGTTTTAAT TTAGTATAAACAT

MGDWSALGKLLDKVQAYSTAGGKVWLSVLFIFRILLLGTAVESAWGDEQSAFRCNTQQPGCENVCYDKSFPISHV RFWVLQIIFVSVPTLLYLAHVFYVMRKEEKLNKKEEELKVAQTDGVNVDMHLKQIEIKKFKYGIEEHGKVKMRGG LLRTYIISILFKSIFEVAFLLIQWYIYGFSLSAVYTCKRDPCPHQVDCFLSRPTEKTIFIIFMLVVSLVSLALNI IELFYVFFKGVKDRVKGKSDPYHATSGALSPAKDCGSQKYAYFNGCSSPTAPLSPMSPPGYKLVTGDRNNSSCRN YNKQASEQNWANYSAEQNRMGQAGSTISNSHAQPFDFPDDNQNSKKLAAGHELQPLAIVDQRPSSRASSRASSRP RPDDLEI

 ${\tt TGTATCCGCTGCTCTTGTGACGTTGTGGAG} \underline{{\tt ATC}} {\tt GGGAGCGTCCTGGGGGCTGTGCTCCATGGCGAGCTGGATACCA}$ TGTTTGTGTGGAAGTGCCCCGTGTTTGCTATGCCGATGCTGTCCTAGTGGAAACAACTCCACTGTAACTAGATTG ATCTATGCACTTTTCTTGCTTGTTGGAGTATGTGTAGCTTGTGTAATGTTGATACCAGGAATGGAAGAACAACTG TATCGTTTGTGCTTTGGCTATGTTCTATCTTCTTCTCTCTTTACTAATGATCAAAGTGAAGAGTAGCAGT GATCCTAGAGCTGCAGTGCACAATGGATTTTGGTTCTTTAAATTTGCTGCAGCAATTGCAATTATTATTGGGGCA TTCTTCATTCCAGAAGGAACTTTTACAACTGTGTGGTTTTATGTAGGCATGGCAGGTGCCTTTTGTTTCATCCTC TCGAGATGTTGGTATGCAGCCTTGTTATCAGCTACAGCTCTGAATTATCTGCTGTCTTTAGTTGCTATCGTCCTG TTCTTTGTCTACTACACTCATCCAGCCAGTTGTTCAGAAAACAAGGCGTTCATCAGTGTCAACATGCTCCTCTGC GTTGGTGCTTCTGTAATGTCTATACTGCCAAAAATCCAAGAATCACAACCAAGATCTGGTTTGTTACAGTCTTCA GTAATTACAGTCTACACAATGTATTTGACATGGTCAGCTATGACCAATGAACCAGAAACAAATTGCAACCCAAGT CAAGGAATTATAGGACTAATTCTCTTTTTGTTGTGTGTATTTTATTCCAGCATCCGTACTTCAAACAATAGTCAG GTTAATAAACTGACTCTAACAAGTGATGAATCTACATTAATAGAAGATGGTGGAGCTAGAAGTGATGGATCACTG GAGGATGGGGACGATGTTCACCGAGCTGTAGATAATGAAAGGGATGGTGTCACTTACAGTTATTCCTTCTTTCAC TTCATGCTTTTCCTGGCTTCACTTTATATCATGATGACCCTTACCAACTGGTACAGGTATGAACCCTCTCGTGAG ATGAAAAGTCAGTGGACAGCTGTCTGGGTGAAAATCTCTTCCAGTTGGATTGGCATCGTGCTGTATGTTTGGACA $\tt CTCGTGGCACCACTTGTTCTTACAAATCGTGATTTTGAC \\ \underline{\textbf{TGA}} \\ \texttt{GTGAGACTTCTAGCATGAAAGTCCCACTTTGAT}$ TATTGCTTATTTGAAAACAGTATTCCCAACTTTTGTAAAGTTGTGTATGTTTTTGCTTCCCATGTAACTTCTCCA GTGTTCTGGCATGAATTAGATTTTACTGCTTGTCATTTTGTTATTTTCTTACCAAGTGCATTGATATGTGAAGTA GAATGAATTGCAGAGGAAAGTTTTATGAATATGGTGATGAGTTAGTAAAAGTGGCCATTATTGGGCTTATTCTCT TTTAGCAAGCATTAAAGCAAATGTATGGCTGCCTTTTGAAATATTTGATGTGTTGCCTGGCAGGATACTGCAAAG AACATGGTTTATTTTAAAATTTATAAACAAGTCACTTAAATGCCAGTTGTCTGAAAAATCTTATAAGGTTTTACC AAATTGAATAACGAGTAAATAATCTTACTTGGGTAGAGATGGCCTTTGCCAACAAAGTGAACTGTTTTGGTTGTT TTAAACTCATGAAGTATGGGTTCAGTGGAAATGTTTGGAACTCTGAAGGATTTAGACAAGGTTTTGAAAAGGATA AATCCCAGCACTTTGGGAGGCTGAGGTGGGTAGATTACTTGAGCCCAGGAATTCAAGACCAGCCTGGGCAACATG GTGAAACCCTGTTTCTATAAAAATAATCTGGGCTTTGTAGCATATGCCTGTGGTCCCAGCTACTGAGGAGGCTG AGGTGGGAGGATTGCTTGAGCCCAGGAGGCAGAGGTTGCAGTGAGCCAAGGTCACGTCACTGCACTCTAGCCTGG CTGCAAAACACTAGGCTTTAGTAGGTACTTATATAAAATCTAGTCCAGTTCTCTCATTTAAAAAAATGAAGACAC TGAAATACAGACTTAAATAGCTCAGATAGCTAATTAGGAAATTTCAAGTTGGCCAATAATAGCATTCTCTCTGAC ATTTAAAAATAATTTCTATTCAAAATACATGCATAATTGATTTTACACCTCATTACTGGTGGATAATTTATGTGA TGTGGATTGCTGGTGTCCAGCATGACCCATAAACAGGTCAGAAGAATGATGGAATGTTTTAGAATAAACTCCTGC TTATAGTATACTACACAGTTCAAAAGATGTTTAAAATGCTTTTGTATTTACTGCCATGTAATTGAAATATATAGA TTATTGTAACCTTTCAACCTGAAAATCAAGCAGTATGAGAGTTTAGTTATTTGTATGTGTCACTAGTGTCTAATG TTCAGAG

MGSVLGLCSMASWIPCLCGSAPCLLCRCCPSGNNSTVTRLIYALFLLVGVCVACVMLIPGMEEQLNKIPGFCENE
KGVVPCNILVGYKAVYRLCFGLAMFYLLLSLLMIKVKSSSDPRAAVHNGFWFFKFAAAIAIIIGAFFIPEGTFTT
VWFYVGMAGAFCFILIQLVLLIDFAHSWNESWVEKMEEGNSRCWYAALLSATALNYLLSLVAIVLFFVYYTHPAS
CSENKAFISVNMLLCVGASVMSILPKIQESQPRSGLLQSSVITVYTMYLTWSAMTNEPETNCNPSLLSIIGYNTT
STVPKEGQSVQWWHAQGIIGLILFLLCVFYSSIRTSNNSQVNKLTLTSDESTLIEDGGARSDGSLEDGDDVHRAV
DNERDGVTYSYSFFHFMLFLASLYIMMTLTNWYRYEPSREMKSQWTAVWVKISSSWIGIVLYVWTLVAPLVLTNR
DFD

GGGGACCCTCTCCTGACGCTGCGCTCTCTGCGAGGCAACCTTTCACGTCCATCGCTTGTCATCTTAGGATCCCCA TGTTATTTTAGCCCAGATTGGCTAGTTCTGGGGAGGCAGCATGGTGGGACGATTCTGTCCCGAGTCCCCGCCAGG CTTTGTTCGGGTCGCCGCTACCAGCGCGGTCTCCCTAGATCCTCCATCCGGGGAACCTCGCCCCGGGTGCGGGTA GGAGACCCTAGCGGGGGGGGGGGGGGAGAAGAGATTTATTCCAGTGAAACAACAACTGGAACTTCAAGTAACTCC TCCCAGAGTACTTCCAACTCTGGGTTGGCCCCAAATCCAACTAATGCCACCACCAAGGCGGCTGGTGGTGCCCTG CAGTCAACAGCCAGTCTCTTCGTGGTCTCACTCTCTCTTCTGCATCTCTACTCTTAAGAGACTCAGGCCAAGAAA CGTCTTCTAAATTTCCCCATCTTCTAAACCCAATCCAAATGGCGTCTGGAAGTCCAATGTGGCAAGGAAAAACAG GAAGAACATGTGAGAGGTTTGACTAGATGATGGATGCCAATATTAAATCTGCTGGAGTTTCATGTACAAGATGAA GGAGAGGCAACATCCAAAATAGTTAAGACATGATTTCCTTGAATGTGGCTTGAGAAATATGGACACTTAATACTA CCTTGAAAATAAGAATAGAAATAAAGGATGGGATTGTGGAATGGAGATTCAGTTTTCATTTGGTTCATTAATTCT ATAAGGCCATAAAACAGGTAATATAAAAAGCTTCCATGATTCTATTTATATGTACATGAGAAGGAACTTCCAGGT GTTACTGTAATTCCTCAACGTATTGTTTCGACAGCACTAATTTAATGCCGATATACTCTAGATGAAGTTTTACAT TGTTGAGCTATTGCTGTTCTCTTGGGAACTGAACTCACTTTCCTCCTGAGGCTTTGGATTTGACATTGCATTTGA AACTCTTGATTATCCATATTGAGTCAAATGGTAGGCATTTCCTATCACCTGTTTCCATTCAACAAGAGCACTACA TTCATTTAGCTAAACGGATTCCAAAGAGTAGAATTGCATTGACCACGACTAATTTCAAAATGCTTTTTATTATTA TTATTTTTTAGACAGTCTCACTTTGTCGCCCAGGCCGGAGTGCAGTGGTGCGATCTCAGATCAGTGTACCATTTG CCTCCCGGGCTCAAGCGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCACCTGCCACCATGCCCG GCTAATTTTTGTAATTTTAGTAGAGACAGGGTTTCACCATGTTGCCCAGGCTGGTTTCGAACTCCTGACCTCAGG TGATCCACCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCTTGAGCCCCCGCGCCCAGCCATCAAAATGCTT TTTATTTCTGCATATGTTGAATACTTTTTACAATTTAAAAAAATGATCTGTTTTGAAGGCAAAATTGCAAATCTT GAAATTAAGAAGGCAAAAATGTÀAAGGAGTCAAAACTATAAATCAAGTATTTGGGAAGTGAAGACTGGAAGCTAA GAATAGCCACATTTAGAACACTTTTTGTTATCAGTCAATATTTTTAGATAGTTAGAACCTGGTCCTAAGCCTAAA AGTGGGCTTGATTCTGCAGTAAATCTTTTACAACTGCCTCGACACACATAAACCTTTTTAAAAAATAGACACTCCC CGAAGTCTTTTGTTCGCATGGTCACACACTGATGCTTAGATGTTCCAGTAATCTAATATGGCCACAGTAGTCTTG TGTGTGTGAATGAACACTCTTGCTTTATTCCAGAATGCTGTACATCTATTTTGGATTGTATATTTGTGTTTGTGTA

FIGURE 2104

CAGAAGCGGCTAGTGGCGGCTGCCTGCGTCCCCAACCCCTCCGCGCAGCGCTCGCGACACGCGTGCCAGGAGTG GGAGCGAGCGGGGCCAGCTGCGTTCTGAGCCTGGGCGCAGCTGCCATCTGCTCTGGGAAGCACCAGGGTGTC $\verb|CCCGCCGCCTCAGCTCGAAGTCAGCCACC| \underline{\textbf{ATG}} \\ \texttt{GAGGCGCAGGCACAAGGTTTGTTGGAGACTGAACCGTTGCAA} \\$ GGAACAGACGAAGATGCAGTAGCCAGTGCTGACTTCTCTAGCATGCTCTCTGAGGAGGAAAAGGAAGAGTTAAAA CAGACTACCACTGCCTACAAGAAAACACATGAAACCCTGAGTCACGCAGGGCAAAAGGCAACTGCAGCTTTCAGC AACGTTGGAACGGCCATCAGCAAGAAGTTCGGAGACATGAGTTACTCCATTCGCCATTCCATAAGTATGCCTGCT ATGAGGAATTCTCCTACTTTCAAATCATTTGAGGAGAGGGTTGAGACAACTGTCACAAGCCTCAAGACGAAAGTA GGCGGTACGAACCCTAATGGAGGCAGTTTTGAGGAGGTCCTCAGCTCCACGGCCCATGCCAGTGCCCAGAGCTTG GCAGGAGGCTCCCGGCGGACCAAGGAGGAGGAGCTGCAGTGC<u>TAA</u>GTCCAGCCAGCGTGCAGCTGCATCCAGAAA CCGGCCACTACCCAGCCCATCTCTGCCTGTGCTTATCCAGATAAGAAGACCAAAATCCCGCTGGGAAAAACCCAG GCCTTGACATTGTTATTCAAATGGCCCCTCCAGAAAGTTTAATGATTTCCATTTGTATTTTGTTGATGATGGAC CACTTGACCATCACATTTCAGTATTCATAGATGACTGTCACATTTTAAAATGTTCCCACTTGAGCAGGTACACAA CTGGTCATAATTCCTGTCTGTGTAATTCGATGTATATTTTTCCAAACATGTAGCTATTGTTTGCTTTGATTTTTG ACCTACATCAATTATGTATGTTAATTTCAGCAATTAAAAGAATTGATTTT

 ${\tt MEAQAQGLLETEPLQGTDEDAVASADFSSMLSEEEKEELKAELVQLEDEITTLRQVLSAKERHLVEIKQKLGMNLMNELKQNFSKSWHDMQTTTAYKKTHETLSHAGQKATAAFSNVGTAISKKFGDMSYSIRHSISMPAMRNSPTFKSFEERVETTVTSLKTKVGGTNPNGGSFEEVLSSTAHASAQSLAGGSRRTKEEELQC$

FIGURE 2106

CGGCCTGCTCCGCCCAGCCGGGGTCGGTGGCCGCATGGCTTCGGTCTCCTCTGCGACCTTCTCGGGCCACGGGGC TGTCCAGAGGCCGGAGAGCGTTTCAGATCACATGTACCGGATGGCAGTTATGGCTATGGTGATCAAAGATGACCG TCTTAACAAAGACCGATGTGTACGCCTAGCCCTGGTTCATGATATGGCAGAATGCATCGTTGGGGACATAGCACC AGCAGATAACATCCCCAAAGAAGAAAACATAGGCGAGAAGAGGAAGCTATGAAGCAGATAACCCAGCTCCTACC AGAGGACCTCAGAAAGGAGCTCTATGAACTTTGGGAAGAGTACGAGACCCAATCTAGTGCAGAAGCCAAATTTGT GAAGCAGCTAGACCAATGTGAAATGATTCTTCAAGCATCTGAATATGAAGACCTTGAACACAAACCTGGGAGACT GCAAGACTTCTATGATTCCACAGCAGGAAAATTCAATCACCCTGAGATAGTCCAGCTTGTTTCTGAACTTGAGGC AGAAAGAAGCACTAACATAGCTGCCAGCTGCCAGTGAGCCACCTCCTGAGACACTCTCTAAATTGCTGCACTCCT GTAACAAACATTATTTTTCCATTTCATTGTATTGTGTTTTGCCATTGTTGGTCTGTTGATTTCCCTAGATGTGAG TCTGTTTGTTTTCAATTGTCTGAACTTCAGCAAGAAATGTGATACAACTTGGGCACTAAAAGAAGCCACAGAACA TAAACACCTAAAATATTAGAATATTTATTGGAGATTTAAAATCATCTTATTCTGACTTAATTACCGATATCCCCG AAGGCTAGGTTCATTGAATAATAGAAAATTTCATTATGATTGCTTTTAAGAACAGATTCTTCAGCTGATTTAGTG ATAAGAATCCAGAAAAGAAAATGTACTAGTGATGTATTCTCTCCCCAGATGAAATTGCTGCCTTATTCAGATTTA CTCTCTTGAGCCAGATTTTGAATTTCACTGCAGACTGCTTCAGACTTCTAATCATAGGCTTGTAAACCTACTAAT AGGCTCTGCCCCTCTTCCCAATACTTTTTGTCATTTAGAGATATAAACCGGGGCATATAAAAATGCAACTTGTAT TCCTTTGTATATTTTCCCTGTCTGACTTATAAATCTTGAGACCTTTATTGTAAAAGCATGTATCATCAGGTGAG AAATATAAATAGGAACTGGGGTCATTGAGCCTCAGGTAGGGAATATATCAACCCGATTTCTTCCTCTTTTTCCC TTTTATAGGATAAATAATCC

CTGCAGCGGCCGTGCCGGTGCCCGGACGAGCCGGCGCGCCGCGCGGCGGCGGCGTGAGCCTCGTGCTGGACGG CTGCGGCTGCCGCGTCTGCGCCAAGCAGCTGGGCGAGCTGTGCACCGAGCGCGACCCATGCGACCCGCACAA GGGCCTATTCTGTCACTTCGGCTCCCCGGCCAACCGCAAGATCGGCGTGTGCACCGCCAAAGATGGTGCTCCCTG CATCTTCGGTGGTACCGCTGCAGCGGAGAGTCCTTCCAGAGCAGCTGCAAGTACCAGTGCACGTGCCTGGA CGGGGCGGTGGGCTGCATGCCCCTGTGCAGCATGGACGTTCGTCTGCCCAGCCCTTGACTGCCCCTTCCCGAGGAG GGTCAAGCTGCCCGGGAAATGCTGCGAGGAGTGGGTGTGTGACGAGCCCAAGGACCAAACCGTGGTTGGGCCTGC CCTCGCGGCTTACCGACTGGAAGACACGTTTGGCCCAGACCCAACTATGATTAGAGCCAACTGCCTGGTCCAGAC ${\tt CACAGAGTGGAGCGCCTGTTCCAAGACCTGTGGGATGGGCATCTCCACCCGGGTTACCAATGACAACGCCTCCTG}$ CAGGCTAGAGAGCCGCCTGTGCATGGTCAGGCCTTGCGAAGCTGACCTGGAAGAGAACATTAAGAAGGG CAAAAAGTGCATCCGTACTCCCAAAATCTCCAAGCCTATCAAGTTTGAGCTTTCTGGCTGCACCAGCATGAAGAC ATACCGAGCTAAATTCTGTGGAGTATGTACCGACGGCCGATGCTGCACCCCCCACAGAACCACCACCCTGCCGGT CTGTCCCGGAGACATGACATCTTTGAATCGCTGTACTACAGGAAGATGTACGGAGACATGGCATGAAGCCAGAG AGTGAGAGACATTAACTCATTAGACTGGAACTTGAACTGATTCACATCTCATTTTTCCGTAAAAATGATTTCAGT AAACAAATAGTCTATCAACCCCAGACACTGGTTTGAAGAATGTTAAGACTTGACAGTGGAACTACATTAGTACAC AGCACCAGAATGTATATTAAGGTGTGGCTTTAGGAGCAGTGGGAGGGTACCAGCAGAAAGGTTAGTATCATCAGA TAGCATCTTATACGAGTAATATGCCTGCTATTTGAAGTGTAATTGAGAAGGAAAATTTTAGCGTGCTCACTGACC TGCCTGTAGCCCCAGTGACAGCTAGGATGTGCATTCTCCAGCCATCAAGAGACTGAGTCAAGTTGTTCCTTAAGT CAGAACAGCAGACTCAGCTCTGACATTCTGATTCGAATGACACTGTTCAGGAATCCGGAATCCTGTCGATTAGACT GTTTTTAATGCTTTGATATTTCAATGTTAGCCTCAATTTCTGAACACCATAGGTAGAATGTAAAGCTTGTCTGAT CGTTCAAAGCATGAAATGGATACTTATATGGAAATTCTGCTCAGATAGAATGACAGTCCGTCAAAACAGATTGTT CAAATGGCCTTTATTAAAAACTGAGTGACTCTATATAGCTGATCAGTTTTTTCACCTGGAAGCATTTGTTTCTAC TTTGATATGACTGTTTTTCGGACAGTTTATTTGTTGAGAGTGTGACCAAAAGTTACATGTTTGCACCTTTCTAGT TGAAAATAAAGTGTATATTTTTTCTATAAA

CACTGCTGACATAACTCCCTTGGTCTTCAATTTAATAGTTGTTAAGTTTTTTGCCCACATTGCATATGCCTTTCAT TCCCTGTCACTGTGACACCCTAGATGTGTGTTACTTCAATTAAAATTCTCAAATTTAATTTTGATTTGCTTCAG, CAGGGAAAATATTCTCAATAATGTAAAATAATTAAGGTCTATACATGGGTTGTATTTTTCTGGTTCACAACAGCA TTTATTTGATACTCTTTCTGTGTATATATTAAGCTTTTGCTGTAGATTGCCTAGTAAAATTACTAAGGATAGGTT GTTTTTACATATGGTCTATTTAAGTCTGATGTTTACGGGGGAAAGTGTAGTTACTAAAAATGTTTAACATAATTT GGAAGAAGAGTATGAACAACCAATACCAATACCTATTGCGTTTGGATTCTTAAGACCCCAGTTTGTTATTCCACT AAACTAGTTATCTTAACCATATCATCTGGTTTTGTGGGCCATTATTTACCTTCCCTTATGTCTTATAGAATAATG GTTAATATTTTTAGGTCAAAATTACTTTTGGAAAGTAACTTTCCCACAATTAACTGTTTTTGAGCACCTGACAAA ATTTAGTGTTTACCTTGCGTGCCATTTTGTGTCATCCTTCATTAAAAAAGCAATTGGAGGTTTGCCAGTTATCTC ACTTCCCTTTTTAAATCAATGTTGTTTTAATGCACTAATCTGAATTCTGTAAAGAGGATTATCTTAGTTTATACT TTGTATTTTATAATGTTCTTGTATAGCAGCTCGGTACTGAAGGCGGTGTTTAACTTGGCAAGCTCTGAGACTTCA AATGGGAACAAATAGTAAGTAGCTAAGTAAACCACATCTTTGCAACCAAAATAAAGATGAGTTAAAAGGTATCTG GTTAGGCCTATTTCATGAGGACTATGCTCTGGTGGGACCACAGGTCACCTGATACTTAGTGCTGTGCTGCCTGAA ACCTCAGCATGGAGACATCACCACATGCACTGTGGCCATTCAGCATCTTTCTGGAGCACCAGTTCACTCCAGGTT TTTATTTTAGGGTGTCATCGATTTTACCTACTTTGTCAGACTGGTAGAAGTTGCTTTGCATATCAGAAAAACTCC GAATCAGACTGCCCTAGAACAGAATGGACAATGCAGGGAGGAGAATTCACACAAACAGCACCTGTTCTGAGGCCT GTGCCAGCCCACCAGGCCTGCTCAAATGTGGTCTTTACTTCAAGTGCACAGAGGCACATGAGGTTTCTGGTGATA TGATAAAATGTTTATTCTCATACAGGTCAAGTACATTTACTTCTATTCACAGTGAGTACCCAATAACAACAAAAG CGCTTACAAATTTGGGGGGGCGTGATTTTAGTACCTTTATTTGAAGTGTAATCATTTTAAATTATTATTTTAAA CTGGGGCAGTTATCAGTGGTTTAAACAGGAACTTTAGTGGCTTCAATTTGTTTAAGAAACATATTAAGTTTGAGG GAAAAATTTCCCATGAAATATTTGGAACGTAAGAGTAGTATTGATTAGAGAAAATTAAATAAGAAACATAGTATG GTAGCCAAATTTTTTAAAAAATCTTGAACTTTTCTGTAGGTCAGTTTTAGAACTGCTGTGAAAAGTGAAGGTTGC CCTGTGGAGATTAAAATTAGAGTTGTTTTCATAACTGACAGCATGGTGAATCCATTTGAGTCAAAGTGAAGAATT TCCTCATCAAGTGACTATACATTTGTTTTTGTGTGCTCAAAAGAAATACTCAAACACAGACTGATATTAACCAGC CAGGTAAATTGAACGACAATGTGGCATTAGGTATTTGGCTGTTTATTGGTCGTTAAATACTATGGTTTTGCAATA TGATTGATGGTAAAAGAGTGATGTCATATTGATACTAGAGTAGCTTGTTTTTTTAGTAGGTGTGGGACCATCTCT CCCAGTAGCATCTGCATTGGTGACCAAGGACACTGCACTTTGAAGAGGTCGCCACTGGGTTATTTAGTGTCTTCA CTGCTTTTGTTAAAAATTGTAAAATTTTGTACACAAAAAGTTGTGTTTTTGAATATCAATTGTTTAGACACACCT ACAATGATAAATAAGTGCCTTTAAAGGCCCCTCTTTCCATGAAATACATCTGTGGTTTAGCAAGGAAAGTACAAA CTTACGTAAAG

 ${\tt MDNAGRRIHTNSTCSEACASPPGLLKCGLYFKCTEAHEVSGDKPASYRCFKVPSPWLSQSVPFFLLYLIKCLFSYRSSTFTSIHSEYPITTKALTNLGGVILVPLFEV}$

GTGACTGCTTAGAAAACTGCACAGCATCTGATGAAATTAGCGAATAAGAACATCAACCATGTCTTACACTCCAGG AGTTGGTGGTGACCCCGCCCAGTTGGCCCAGAGGATCTCTTCTAACATCCAGAAGATCACACAGTGTTCTGTGGA AATACAAAGAACTCTGAATCAACTTGGAACACCTCAAGATTCACCTGAATTGAGGCAACAGTTGCAACAGAAGCA GCAGTATACTAACCAGCTTGCCAAAGAAACAGATAAGTACATTAAAGAGTTTGGATCTCTGCCCACCACCACCAC TGAACAGCGTCAAAGGAAAATACAGAAGGATCGCTTAGTGGCAGAGTTCACAACATCACTGACAAACTTCCAGAA GGTCCAGAGGCAGGCTGCTGAGCGAGAGAAAGAGTTTGTTGCTCGAGTAAGAGCCAGTTCCAGAGTGTCTGGCAG TTTTCCTGAGGACAGCTCAAAAGAAAGGAATCTTGTATCCTGGGAAAGCCAAACTCAACCTCAAGTGCAGGTGCA GCGCAAATCCAGAAAAACCCTGTGCATCATCATTCTTATCCTTGTCATTGGAGTTGCGATTATCAGTCTCATCAT ATGGGGATTGAACCACTGAAGTTATAAAGGAGCACACTGTCGCACTACATTGTCTAAATTATGTAGGAAGATTCC TGTAATCATGTTTTTTAATTATTTTTAAAGCTATTGTATAAAGGATGGTTCCCATACTTTGTTATTTTTATT GGGGGGGTTGGGTTCCTTTGGATTAAATCTGATATTTTCTAATACTGAAAGATTTTCTAAATGTCACTGCT GACATAACTCCCTTGGTCTTCAATTTAATAGTTGTTAAGTTTTTTGCCCACATTGCATATGCCTTTCATTTATAAT CACTGTGACACCTAGATGTGTTTACTTCAATTAAAATTCTCAAATTTAATTTTGATTTGCTTCAGCAGGGAA AATATTCTCAATAATGTAAAATAATTAAGGTCTATACATGGGTTGTATTTTTCTGGTTCACAACAGCACAAAGTG TCTTTCATTTTTTTGTTGGTTTTCTTTTAAGATCTTTTTTACCCTGAAGTCGGTGAATACTTTTCTAGTTTATTT GATACTCTTTCTGTGTATATATATAAGCTTTTGCTGTAGATTGCCTAGTAAAATTACTAAGGATAGGTTGTTTTTA CATATGGTCTATTTAAGTCTGATGTTTACGGGGGGAAAGTGTAGTTACTAAAAATGTTTAACATAATTTGGAAGAA GAGTATGAACA

MAEEGIAAGGVMDVNTALQEVLKTALIHDGLARGIREAAKALDKRQAHLCVLASNCDEPMYVKLVEALCAEHQIN LIKVDDNKKLGEWVGLCKIDREGKPRKVVGCSCVVVKDYGKESQAKDVIEEYFKCKK

GGCCGCCTCGCACCCGGAACAACAAAGCAAGGAAGACGGAGTCCGAGCCTCGGGGGCTCCTAGCAACGGGCCGGG GCGGGAGTTCCATGGAGACTGGGGAGCGCCCGTCTCATCCTCATCCTTGTCCTCCAGCTTCTCCTTCGCATCC GACGCAACCGGCAGCAGCGCTGCCGCCGCTCCTCAGCCACCGCTCCCTCTTCCCACGGATGTGATCTTCGTGGT GGAAAGCTAAATTTTAAAACCACCCCAATGGATGCAGACAGTGATGTTGCATTGGACATTCTAATTACAAATGTA GTCTGTGTTTTTAGAACAAGATGTCATTTAAACTTAAGGAAGATTGCTTTGGAAGGAGCAAATGTAATTTATAAA CGTGATGTTGGAGTAATATTAATGAAGCTTAGAAAACCTAGAATTACAGCTACAATTTGGTCCTCAGGAAAAATT ATTTGCACTGGAGCAACAAGTGAAGAAGAAGCTAAATTTGGTGCCAGACGCTTAGCCCGTAGTCTGCAGAAACTA GGTTTTCAGGTAATATTTACAGATTTTAAGGTTGTTAACGTTCTGGCAGTGTGTAACATGCCATTTGAAATCCGT TTGCCAGAATTCACAAAGAACAATAGACCTCATGCCAGTTACGAACCTGAACTTCATCCTGCTGTGTGCTATCGG ATAAAATCTCTAAGAGCTACATTACAGATTTTTTCAACAGGAAGTATCACAGTAACAGGGCCCAATGTAAAGGCT TTGGTTAGAATCTCTAACTGAGCACCTTTTAAACCTGCTGCACATTGGACTCAAAAGGAAAACTGGACCAACAAT AATTGAGGAAATAGACTCTTTTATTCATTCACGGCTACAGTGTAAGCTCCAGTCCCTTTGGATTTTATTCCAAAC CAGTAATTCTCATGTCCCCATAAGCAGAGCTGTCACAGTGTGCACTACCTTAGATTGTTTTATTGTCGTCATTGT TATTTTTTCCATTTTGAGCTAATGTGTTTTATTTGTGAATAGTCTTTTACATTTTTGTATGCTGAATATGGGCA CCAAAGAACCTGTAAAAGTTATCTTTTTCAATTGAATGTGCACAAATAAAAGTTTGGA

GCCGGGGAGGACGCAGGCAGGCGGGCAGCGGAGGCGGCAGCCCGGTGCGGTCCCCGCGGCTCTCGGCGGA GCCCCGCGCCCCGCGCCATGCCCGAAGACCCCGGCACAGCATATATAGCAGTGACGAGGATGATGAGGACTT TGAGATGTGTGACCATGACTATGATGGGCTGCTTCCCAAGTCTGGAAAGCGTCACTTGGGGAAAACAAGGTGGAC CCGGGAAGAGATGAAAAACTGAAGAAGCTGGTGGAACAGATGGAACAGATGACTGGAAAGTTATTGCCAATTA TCTCCCGAATCGAACAGATGTGCAGTGCCAGCACCGATGGCAGAAAGTACTAAACCCTGAGCTCATCAAGGGTCC TTGGACCAAAGAAGAAGATCAGAGAGTGATAGAGCTTGTACAGAAATACGGTCCGAAACGTTGGTCTGTTATTGC CAAGCACTTAAAGGGGAGAATTGGAAAACAATGTAGGGAGAGGTGGCATAACCACTTGAATCCAGAAGTTAAGAA AACCTCCTGGACAGAAGAGGAAGACAGAATTATTTACCAGGCACAAGAGACTGGGGGAACAGATGGGCAGAAAT CGCAAAGCTACTGCCTGGACGAACTGATAATGCTATCAAGAACCACTGGAATTCTACAATGCGTCGGAAGGTCGA TTTGATGGGTTTTGCTCAGGCTCCGCCTACAGCTCAACTCCCTGCCACTGGCCAGCCCACTGTTAACAACGACTA TTCCTATTACCACATTTCTGAAGCACAAAATGTCTCCAGTCATGTTCCATACCCTGTAGCGTTACATGTAAATAT AGTCAATGTCCCTCAGCCAGCTGCCGCAGCCATTCAGAGACACTATAATGATGAAGACCCTGAGAAGGAAAAGCG AATAAAGGAATTAGAATTGCTCCTAATGTCAACCGAGAATGAGCTAAAAGGACAGGTGCTACCAACACAGAA CCACACATGCAGCTACCCCGGGTGGCACAGCACCACCACTTGCCGACCACACCAGACCTCATGGAGACAGTGCACC TGTTTCCTGTTTGGGAGAACACCACTCCACTCCATCTCTGCCAGCGGATCCTGGCTCCCTACCTGAAGAAAGCGC CTCGCCAGCAAGGTGCATGATCGTCCACCAGGGCACCATTCTGGATAATGTTAAGAACCTCTTAGAATTTGCAGA AACACTCCAATTTATAGATTCTTTCTTAAACACTTCCAGTAACCATGAAAACTCAGACTTGGAAATGCCTTCTTT AACTTCCACCCCCTCATTGGTCACAAATTGACTGTTACAACACCATTTCATAGAGACCAGACTGTGAAAACTCA AAAGGAAAATACTGTTTTTAGAACCCCAGCTATCAAAAGGTCAATCTTAGAAAGCTCTCCAAGAACTCCTACACC ATTCAAACATGCACTTGCAGCTCCAGAAAATTAAATACGGTCCCCTGAAGATGCTACCTCAGACACCCTCTCATCT AGTAGAAGATCTGCAGGATGTGATCAAACAGGAATCTGATGAATCTGGAATTGTTGCTGAGTTTCAAGAAAATGG ACCACCCTTACTGAAGAAAATCAAACAAGAGGTGGAATCTCCAACTGATAAATCAGGAAACTTCTTCTGCTCACA CCACTGGGAAGGGGACAGTCTGAATACCCAACTGTTCACGCAGACCTCGCCTGTGGCAGATGCACCGAATATTCT TACAAGCTCCGTTTTAATGGCACCAGCATCAGAAGATGAAGACAATGTTCTCAAAGCATTTACAGTACCTAAAAA CAGGTCCCTGGCGAGCCCTTGCAGCCTTGTAGCAGTACCTGGGAACCTGCATCCTGTGGAAAGATGGAGGAGCA GATGACATCTTCCAGTCAAGCTCGTAAATACGTGAATGCATTCTCAGCCCGGACGCTGGTCATGTGAGACATTTC CAGAAAAGCATTATGGTTTTCAGAACACTTCAAGTTGACTTGGGATATATCATTCCTCAACATGAAACTTTTCAT TCCAACAGATCAGTATTTTTCCTGTGATGGGTTTTTTGAAATTTGACACATTAAAAGGTACTCCAGTATTTCAC TTTTCTCGATCACTAAACATATGCATATATTTTTAAAAATCAGTAAAAGCATTACTCTAAGTGTAGACTTAATAC CATGTGACATTTAATCCAGATTGTAAATGCTCATTTATGGTTAATGACATTGAAGGTACATTTATTGTACCAAAC CATTTTATGAGTTTTCTGTTAGCTTGCTTTAAAAATTATTACTGTAAGAAATAGTTTTATAAAAAATTATATTTT TATTCAGTAATTTAATTTTGTAAATGCCAAATGAAAAACGTTTTTTGCTGCTATGGTCTTAGCCTGTAGACATGC AGATGTGTTGTTGATGTTCTATGTTTTGTTTTGAGTGTAGCCTGACTGTTTTATAATTTTGGGAGTTCTGCATT TGATCCGCATCCCTGTGGTTTCTAAGTGTATGGTCTCAGAACTGTTGCATGGATCCTGTGTTTGCAACTGGGGA GACAGAAACTGTGGTTGATAGCCAGTCACTGCCTTAAGAACATTTGATGCAAGATGGCCAGCACTGAACTTTTGA GATATGACGGTGTACTTACTGCCTTGTAGCAAAATAAAGATGTGCCCTTATTTT

MARRPRHSIYSSDEDDEDFEMCDHDYDGLLPKSGKRHLGKTRWTREEDEKLKKLVEQNGTDDWKVIANYLPNRTD VQCQHRWQKVLNPELIKGPWTKEEDQRVIELVQKYGPKRWSVIAKHLKGRIGKQCRERWHNHLNPEVKKTSWTEE EDRIIYQAHKRLGNRWAEIAKLLPGRTDNAIKNHWNSTMRRKVEQEGYLQESSKASQPAVATSFQKNSHLMGFAQ APPTAQLPATGQPTVNNDYSYYHISEAQNVSSHVPYPVALHVNIVNVPQPAAAAIQRHYNDEDPEKEKRIKELEL LLMSTENELKGQQVLPTQNHTCSYPGWHSTTIADHTRPHGDSAPVSCLGEHHSTPSLPADPGSLPEESASPARCM IVHQGTILDNVKNLLEFAETLQFIDSFLNTSSNHENSDLEMPSLTSTPLIGHKLTVTTPFHRDQTVKTQKENTVF RTPAIKRSILESSPRTPTPFKHALAAQEIKYGPLKMLPQTPSHLVEDLQDVIKQESDESGIVAEFQENGPPLLKK IKQEVESPTDKSGNFFCSHHWEGDSLNTQLFTQTSPVADAPNILTSSVLMAPASEDEDNVLKAFTVPKNRSLASP LQPCSSTWEPASCGKMEEQMTSSSQARKYVNAFSARTLVM

AGGAGGGACCGGGTCTGCGGAGCGGGGACTCGGGGGCCTCGGCGGGGCGCGCACACGCAGGCGGGGGGGCGGCCCGGGG CCGGGGCGGCCGAGGACGCGGCCCAAGCTGTGGAGACGCCGGGCTGGAAGGCCCCGGAGGACGCCGGCCCCC AGCCCGGAAGTTATGAGATCCGACACTATGGACCAGCCAAGTGGGTCAGCACGTCCGTGGAGTCTATGGACTGGG ATTCAGCCATCCAGACGGGCTTTACGAAACTGAACAGCTACATTCAAGGCAAAAACGAGAAAAGAGATGAAAATAA AGATGACAGCTCCAGTGACAAGCTACGTGGAGCCTGGTTCAGGTCCTTTTAGTGAGTCTACCATTACCATTTCCC TGTATATTCCCTCTGAACAGCAATTTGATCCACCCAGGCCTTTAGAGTCAGATGTCTTCATTGAAGATAGAGCCG AAATGACTGTTTTGTACGGTCTTTCGATGGATTTTCTAGTGCCCAAAAGAATCAAGAACAACTTTTGACATTAG CAAGCATTTTAAGGGAAGATGGAAAAGTTTTCGATGAGAAGGTTTACTACACTGCAGGCTACAACAGTCCTGTCA AATTGCTTAATAGAAATAATGAAGTGTGGTTGATTCAAAAAAATGAACCCACCAAAGAAAAACGAA<u>TGA</u>GAAAAAT GAAAGGAAGTTCTGCTGTCAGAGGCAAAACATCTGTTTATCATAGACATCAACATGACCTATAAGTAAAGTGCGT GTCTAGTGTCTTCTATTGAGAGTACTACTATTAATTAAGCTTATTTCCAATGTGCCTTTTTAATGCTTGAAGTTT TATCTACATACACAGGTAACAGAGGACAGTAGTCTGTAAACATATAAATCGGTCATAACTATCGTGGTCTTTATT TCTGTGAGGATC

 ${\tt MAEPLQPDPGAAEDAAQAVETPGWKAPEDAGPQPGSYEIRHYGPAKWVSTSVESMDWDSA1QTGFTKLNSY1QGKNEKEMKIKMTAPVTSYVEPGSGPFSESTITISLY1PSEQQFDPPRPLESDVF1EDRAEMTVFVRSFDGFSSAQKNQEQLLTLASILREDGKVFDEKVYYTAGYNSPVKLLNRNNEVWL1QKNEPTKENE$

AGAACCACCACAACAAATAACCAGCCTGGCAGTCAATTCTTCCTATGGACTGGTGGTTTTTTGGCAATTGCAATGG CATTGCTATGGTTGACTACCTCCAGAAAGCAGTGCTGCTCAACCTGGGCACTATTGAATTATATGGCTCTAATGA TCCTTATCGGAGAGAACCCCGATCTCCTCGTAAATCTCGACAGCCTTCAGGAGCCGGTCTGTGTGATATTAGTGA AGGGACTGTTGTTCCAGAGGATCGCTGCAAATCTCCAACCTCTGCAAAGATGTCAAGGAAGTTAAGCTTACCTAC TGACCTAAAGCCTGATTTAGATGTAAAGGATAACTCCTTTAGCCGATCACGGAGTTCAAGTGTAACAAGCATTGA CAAAGAATCCCGAGAAGCGATCTCCGCTCTTCATTTCTGTGAAACGTTTACTCGAAAGACGGACTCGTCCCCTTC CCCTTGTCTATGGGTTGGAACAACGCTAGGAACAGTGCTTGTCATTGCACTGAACCTTCCCCCAGGGGGAGAGCA AAGACTTCTTCAGCCAGTAATTGTGTCTCCAAGTGGTACTATATTGAGGTTAAAAGGTGCAATCTTGAGAATGGC ATTTCTGGATACCACAGGCTGCTTAATACCACCTGCGTATGAACCCTGGAGAGAGCACAATGTTCCTGAAGAAAA λ AGACGAAAAGGAGAAATTGAAAAAACGGCGGCCTGTCTCAGTATCCCCCTCTTCTCAGGAAATTAGTGAAAA $^{\prime}$ CCAGTATGCAGTGATATGTTCTGAAAAGCAAGCAAAAGTAATCTCACTGCCAACCCAGAACTGTGCTTATAAGCA AAATATTACAGAGACCTCGTTTGTGCTTCGTGGAGATATTGTAGCATTGAGTAACAGTATCTGCCTTGCCTGTTT CTGTGCCAATGGACATATAATGACTTTTAGTTTGCCAAGTTTAAGACCTCTGTTGGATGTATTACTTGCCCCT TACCAATATGCGGATAGCCAGAACGTTCTGCTTTACCAACAATGGACAAGCATTATACCTTGTTTCACCTACAGA AATCCAGAGACTTACTTATAGTCAAGAGACCTGTGAAAATCTTCAGGAAATGTTGGGTGAACTCTTCACTCCTGT AGAAACACCTGAAGCACCAAACAGGGGATTCTTTAAAGGCTTATTTGGAGGTGGTGCACAATCTCTTGACAGAGA AGAACTATTTGGAGAATCGTCCTCAGGAAAGGCTTCAAGGAGCCTTGCACAGCATATTCCTGGCCCTGGTGGCAT TGAAGGCGTAAAAGGGGCAGCATCTGGAGTTGTTGGTGAATTAGCACGAGCCAGGCTGGCACTAGATGAAAGAGG GCAGAAACTTGGCGATCTGGAAGAAGAACTGCGGCCATGTTATCAAGTGCAGAGTCATTTTCTAAACATGCTCA TGAGATTATGTTGAAATACAAAGATAAGAAGTGGTACCAGTTCTGACAACCAGAATCCAATAAGTCCAACTTCAG CCAGAAGGAAAAAAGTTTTCCATTTTTATTACATTCTTTAGGAAAGTTAACGTTAAAGGGATGTTCGTCACTGAA TACTGTTCTTTCCTAGCACAGTCATGCACTGTTTTACCTCAGTCATGTGGCTTTAACTGAGGAGTGTTCACACGC ACTCGAAATGGAGTATATGGTGTGCCAGTTATGAGTTGACCATTTGGGAATTAAACAGGTCACACGTGACAGA TGAAGAAACCAAGGGGGCTGCTGAGGAGACCTGGTGCAGGGACTAATCCTGGATCATTCCTGTATTAAACTTTCA TATGCCAAAAGGGTTTGTGCCGTTTTATCTGCCATCAGTGTTTGACCTGTTTAGGGCAGAGGCAATAAGTCAGAA GTCTTGAAGTTGAAATAGTTATATGTGTGTCATTGGACTGGATTATAAACAGCTGTCTTGGACTTTCCCTCTCTT TGAATGGTGGGCTTTAAATAATAAAAACATACACATAGTTGACTTGTGTATGAGCTACTCTTGGATTCTTGTTAT TATAGACTTGTATTTAGTTCATATTTTGTCAAAAGCAAAACAAGAAGATACATCACTTTTCATTGAAAAGAAAAG TGTAGAGCATGACTGAATTGCTCATCATTCTGGGAGTTTCCATGTAGTGGCTATGCAGTGTGGAAAAGTGAGAAAA ACCTCCATTGTGGTGAGGAGAATACTTCAATGTCCCTTGTCCTTGTTCTCATTAATTCAGCTAAAGGTGGATTTG ACCAAAATAATGCTGGTTAAATTTGTAGAAATGTTGAAATTGGCTGTGTTTTAAATTTTGCTTGAATTTTTATAA AATGTTTAACCAAATGTACCTTTGCATTCTTTAATTAAAATTGCTT

 ${\tt MPSRLRKTRKLRGHVSHRHGRIGKHRKHPGGRGNAGGLHHHRINFDKYHPGYFGKVGMKHYHLKRNQSFCPTVNLDKLWTLVSEQTRVNAAKNKTGAAPIIDVVRSGYYKVLGKGKLPKQAVTVQAKFFSRRAEEKIKSVGGACVLVA}$

CTGAGCTCCGGTAGCCCGCCGCTGGAGGAGCTGTTCACCCGGGGCGGCCCTTGCGGACCTTCCTCGAGCGCCAG GCGGGGTCTGAAGCCCATTTGAAGGTCAGGAGGCCCGAGTTGCTGGCGGTGATCAAACTGCTGAACGAGAAGGAG CGGGAGCTGCGGGAGACTGAGCACTTGCTGCACGGTAAGGGTCGGGCCCCGGGGGAGAGGCGTCAGAGCACATTCT TGACTCTTCGTTTGACTTTTCCACTGCCCACACTACCCGAGTTTGAAACTCTTTACTCACTTGCAGCCGTTTTTA TTTTGGATCAGAGGTCAGGACATCATTACGTGCTGTGATCCCATCCTCTCTGTGGGCTCTCTTGTGCTCCTTTG CCACGGCGCTCTGCCGCCTTTTACATGCTTATTAGTTGTGGACTCGGGCAAGAGCTCATTAGCTCAGCAAGGATA AATAAGGCACTGTCCCTGTGATGGGCTCCACAGCGGTGTTTCTCAAAGTGTGGTGTGGAGACCCATTTGCAGTAG TATCAGGGCAGTGCTTGTTAATAGCAGACTTAGGACTCAGAATCTCAGACCTATACGTGGGTAAAGGTACTAAAT TGGGAAATTCAGTATGGCCTAAGTATAGAATAGGTGGGAGATGATGTCATAGAAACATGAAGCCAGAAAAATAGT TAAGAACCTTGCAAGACAAAGAATTTGGATTTATTTTTTATAGACCATGGAAAGTTAGCAAATGTTTTTAAGCAG AGAATTCACGTCTTTGTAAAGAAAGTTAATGGTGGCATGCGCTGAGGATAAATTGGAGTATTCTCCAGAAACGC TGGTGGCTGACAGGCCAGGGAGGCAGTTGAAACAATCCAAAGAAGAAATGGTGATAGGCATAGTTCTGACTC TTTTTTAAAAAGATGAGTTTTGCATTGAATGCCATATTAAGTTAAAAATACCTGTGAAAAAGGAATTCCAATAAAG ATATCTGTACTAGTCTAGGAGAAAAATTACTGACATAGGAGAAAAATTGAGCCCAAATAATCATATGAGAGCTC TCGAGATATACAGTACGTGGTAAATTAAACCTTAGAAGTAGATGAGAACACTCAGGGAAAATGTGTTAAGATAGA GTAAGAGATCCTTGGCCAGGCGTGGTCGCCTCACGCCTCTAATTCCAGCACTTTGAGAGGCTCAGGTGGGCCGATC TGGGCATGGTGCGTGCCTGTGGTCCCAGCTACTTGAGAGGCTGAGGTGGGAGAATCGCTTGAACCCGGGAGG TGGAGGTTGCAGTGAGCCAAGATGGTGCCACTGCATTCCAGCCTGGGTGACAGCGCAAGACCCTGCCTC

ATGCGGTCCCGGGTCTGTGGGGCGCTGCCCGGTGGCTCTGGCCCGGCCGGGCCGTTGGCCCAGCCCGCCGGCCC GCGGGGTCTGAAGCCCATTTGAAGGTCAGGAGGCCCGAGTTGCTGGCGGTGATCAAACTGCTGAACGAGAAGGAG CGGGAGCTGCGGGAGACTGAGCACTTGCTGCACGATGAGAATGAAGATTTAAGGAAACTTGCAGAGAATGAAATC ACTTTGTGTCAAAAAGAAATAACTCAGCTGAAGCATCAGATTATCTTACTTTTGGTTCCCTCAGAAGAAACAGAT GAAAATGATTTGATCCTGGAAGTAACTGCAGGAGTTGGAGGTCAGGAGGCAATGTTGTTTACATCAGAGATATTT GATATGTATCAGCAATATGCTGCATTTAAAAGATGGCATTTTGAAACCCTGGAATATTTTCCAAGTGAACTAGGT ${\tt AGAGTACAAAGAGTGCCAAAGACAGAAAAGCAAGGCCGCGTCCATACTAGCACCATGACTGTAGCAATATTACCC}$ GGGCAGCATGTAAATACCACGGACAGTGCTGTCCGGATAGTTCATCTTCCAACAGGTGTTGTTTCTGAATGTCAA GAAGAAGAAATAAATAAAAGACAGAATGCTAGAAAAATTCAGATTGGAAGTAAAGGAAGATCAGAGAAAATAAGA ACATATAATTTTCCACAGAACCGGGTCACAGATCACAGAATAAACAAGACGCTGCATGATCTTGAAACTTTTATG CAAGGAGATTATCTACTGGATGAACTTGTACAGTCATTGAAGGAATACGCCGATTATGAATCTTTAGTAGAAATT ATTTCCCAAAAAGTTTAA

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ATCAAGGTGCTGGGAGAGGAATTAGATGGCTGTAATTCAAAGTTAATGGAATTAGATGCAGCAGTACAGAAATTC ATTAGACAAGCTGAGAATCGGCTCTCCAAGCTCAATCAGGCAGCATCACATTTAGAAGAATACAATGAAATGCTT GAATTAATTTTGAAGTGGATTGAAAAAGCTAAAGTCTTGGCTCATGGAACTATTGCATGGAATTCTGCAAGCCAG CTTCGGGAACAATATATTTTGCATCAGACCCTGCTAGAAGAATCCAAAGAAATTGACAGTGAGCTGGAAGCAATG ACTGAGAAATTACAGTACCTCACTAGCGTGTACTGTACAGAAAAAATGTCTCAGCAAGTGGCAGAACTGGGACGG GAGACTGAGGAGTTGCGACAGATGATCAAAATTCGTTTGCAGAACCTCCAAGATGCAGCTAAGGATATGAAAAAA TTTGAAGCAGAGTTGAAAAAGTTACAAGCTGCCTTGGAGCAAGCCCAGGCAACACTGACTTCTCCAGAAGTTGGA CGTCTCAGTCTCAAGGAGCAGCTCTCTCATCGGCAGCATTTGTTGTCTGAGATGGAGTCACTGAAGCCGAAGGTG CAAGCAGTGCAGCTCTGCCAGAGTGCCCTCCGGATCCCCGAGGATGTGGTTGCCAGCTTACCTCTGTCATGCT GCTCTGCGGCTGCAGGAAGAGGCCAGCCGGCTGCAGCACCCGCCATCCAGCAGTGTAACATCATGCAGGAAGCT GTGGTACAATATGAACAATATGAGCAAGAAATGAAACATCTCCAGCAACTGATAGAAGGAGCTCACAGAGAGATT GAGGATAAACCTGTTGCCACCAGTAACATACAGGAGCTGCAGGCTCAGATTTCTCGGCATGAGGAGCTGGCGCAG AAAATTAAGGGCTACCAGGAGCAGATCGCTTCTTTGAATTCCAAGTGCAAGATGCTGACGATGAAAGCCAAGCAC GCCACCATGCTGCTGACGGTGACCGAGGTCGAGGGGCTGGCGGAAGGGACAGAGGACCTGGATGGGGAGCTCCTC CCCACGCCTTCGGCCCACCCCTCTGTGGTCATGATGACTGCAGGTCGCTGTCACACTTTGCTGTCACCGGTCACT GCAAAAATTCACCCCAGCACATCCGCATCCCAGGAGTTCTATGAACCGGGATTGGAGCCATCCGCTACTGCCAAA CTGGGTGATTTGCAGCGTTCTTGGGAAACCTTAAAGAATGTGATCAGTGAGAAGCAGCGCACACTCTATGAAGCT TTGGAACGCCAGCAGAAGTACCAGGACTCCCTCCAGTCCATCTCTACGAAGATGGAGGCCATTGAGCTGAAACTC ATGCTCCAGGATGAAATCAATGAGCTCCAGTCCTCTCTCGCAGAGGAGCTGGTATCCGAGTCTTGTGAGGCCGAC CCTGCGGAGCAGCTGGCCTTGCAGTCCACGCTCACTGTCTTAGCCGAGCGAATGTCCACCATCAGGATGAAAGCC TCGGGGAAACGGCAGCTTTTGGAGGAGAAGTTGAATGATCAGCTGGAGGAACAAAGGCAGGAACAGGCCCTGCAG AGGTATCGCTGTGAAGCCGATGAGCTGGACAGCTGGCTCTTGAGTACCAAGGCCACTCTGGACACTGCGCTGAGT CCACCCAAGGAGCCCATGGACATGGAGGCCCAGCTTATGGACTGCCAGAATATGCTGGTGGAAATAGAGCAGAAG GTGGTGGCTTTATCAGAACTGTCAGTCCACAATGAGAACCTGCTGCTGGAGGGCAAAGCTCACACCAAGGACGAG GCCGAGCAGCTGGCTGGAAAGCTGAGAAGGCTCAAGGGGAGCCTGCTGGAGCTGCAGAGAGCCCTGCATGATAAG CAGCTCAACATGCAGGGAACAGCACAGGAGAAGGAGGAGGAGGCGATGTTGACCTAACAGCCACGCAGAGCCCCGGC GTCCAGGAATGGCTGGCCCAAGCTCGCACCACATGGACCCAGCAGCGGCAGAGCAGTCTCCAGCAACAAAAAGAG TTAGAACAGGAATTAGCCGAGCAGAAGAGTCTCCTTCGCTCAGTAGCCAGTCGTGGAGAGGAGATTCTAATTCAA CATTCGGCGGCAGAGACCTCTGGTGATGCTGGCGAAAAACCTGATGTTTATCCCAGGAGTTGGGGATGGAAGGG GAGAAATCATCCGCTGAAGACCAGATGAGAATGAAATGGGAAAGCCTACATCAAGAATTTAGTACCAAGCAGAAA CTACTACAGAATGTTCTGGAACAGGAACAAGAGCAAGTGCTTTATAGCAGGCCAAATCGACTCTTGTCTGGTGTG TTCGAGGAGGTTTCATCCCAGAGTGGAGGGGCAAAGAGGCAGAGTATACACTTGGAGCAGAAGTTGTATGATGGA GTCTCAGCCACCTCTACTTGGTTGGATGACGTTGAAGAACGTTTATTTGTTGCCACAGCACTTTTACCAGAAGAA ACAGAGACTTGTCTCTCAACCAAGAGATTCTTGCCAAAGACATTAAGGAAATGTCTGAAGAAATGGATAAGAAC AAAAACTTGTTTTCCCAAGCTTTTCCAGAGAATGGTGATAATCGAGATGTTATTGAAGATACTTTGGGTTGTCTT CTAAATTTCCAGAATGATCTGAAAGTGCTGTTTACATCACTGGCTGACAAAATACATCATTCTGCAAAAACTG GCAAATGTGTTTGAACAGCCCGTAGCAGAACAAATAGAGGCCAATACAACAGGCTGAAGATGGACTCAAAGAATTT GATGCAGGAATCATTGAATTAAAGAGGCGTGGTGACAAGCTACAGGTCGAGCAGCCGTCCATGCAAGAACTCTCC AAGCTCCAGGACATGTATGATGAGCTGATGATGATCATTGGCTCCCGGAGGAGTGGTCTGAATCAGAACCTTACA CTCAAGAGTCAGTATGAGAGGGCCCTACAAGATCTGGCTGACCTGCTAGAAACTGGTCAGGAGAAGATGGCAGGA GACCAGAAAATCATCGTGTCTTCCAAAGAGGAAATCCAGCAACTACTTGACAAACATAAGGAATACTTTCAGGGC

2308/6881 FIGURE 2123B

CTGGAATCTCATATGATCTTGACTGAAACACTCTTCAGAAAGATAATCAGCTTTGCAGTCCAAAAGGAAACCCAG TTCCATACAGAGCTGATGGCTCAGGCTTCTGCTGTACTGAAACGGGCTCACAAGAGGGGTGTGGAGCTGCAGTAC ATTCTAGAGACGTGGTCCCATCTGGATGAGGACCAGCAGGAGCTCAGCAGACAGCTGGAGGTGGTAGAAAGCAGC ATCCCAAGCGTGGGTCTGGTGGAGGAGAACGAGGACAGGCTTATTGACCGCATAACACTCTACCAGCATTTAAAA TCTAGCCTTAATGAATACCAGCCCAAATTATATCAAGTATTAGATGATGGGAAACGACTTCTGATATCCATCAGC TGCTCAGATCTAGAAAGCCAACTAAATCAACTTGGAGAGTGCTGGCTAAGTAACACCAATAAAATGTCTAAGGAA CTTCACAGACTGGAAACAATATTGAAACACTGGACCAGATATCAAAGTGAATCTGCAGATCTAATTCACTGGTTA CAATCTGCAAAAGACCGGCTAGAATTTTGGACTCAGCAATCTGTGACAGTCCCACAAGAGCTGGAAATGGTCCGT GATCATCTAAATGCTTTCCTGGAGTTTTCTAAAGAAGTGGATGCCCAATCTTCCCTGAAATCATCTGTTCTGAGT ACTGGAAATCAGCTCCTTCGACTAAAAAAGGTGGACACAGCCACGCTGCGCTCTGAGCTGTCGCGCATTGATAGC CAGTGGACTGACCTGCTAACCAATATCCCAGCCGTCCAGGAGAAGCTCCACCAGCTCCAGATGGATAAACTGCCT TCCCGCCATGCCATTTCTGAAGTCATGAGTTGGATTTCTCTAATGGAAAATGTTATTCAGAAGGATGAAGATAAT ATTAAAAATTCCATAGGTTACAAGGCAATTCATGAATACCTTCAGAAATATAAGGGTTTTAAGATAGACATTAAC TGTAAACAGCTGACAGTGGATTTTGTGAACCAGTCCGTGCTACAAATCAGCAGTCAGGATGTGGAAAGTAAGCGT AGTGATAAGACTGATTTTGCTGAGCAACTTGGAGCAATGAATAAAAGTTGGCAAATTCTGCAAGGTCTAGTAACT GAGAAGATCCAGCTGTTGGAAGGCTTATTGGAATCTTGGTCAGAATATGAAAATAATGTACAATGTCTGAAAACA TGGTTTGAAACCCAGGAAAAGAGACTAAAACAACAGCATCGAATTGGAGATCAGGCTTCTGTTCAAAATGCACTG AAAGACTGTCAGGATCTGGAAGATTTGATTAAAGCAAAAGAAAAAGAAGTAGAGAAAATTGAGCAGAATGGACTT GCTTTGATTCAGAACAAGAAGAAGACGTCTCTAGCATTGTCATGAGCACACTGCGAGAGCTCGGCCAAACCTGG GCAAATTTAGATCACATGGTTGGACAATTAAAGATACTGCTGAAATCAGTGCTTGACCAATGGAGTAGTCACAAA GTGGCCTTTGACAAGATAAACAGTTACCTCATGGAGGCCAGATACTCTCTTTCCCGATTCCGTCTGCTGACTGGC TCCTTAGAAGCTGTGCAAGTTCAGGTGGACAATCTTCAGAATCTCCAAGATGATCTGGAAAAACAGGAAAGGAGC ACACTGAAAGAAGTCAACATGAGATGGAATAACTTGCTGGAAGAGATTGCTGAGCAGCTACAGTCCAGCAAGGCC CTACTTCAGCTTTGGCAAAGATACAAGGACTACTCCAAACAGTGTGCTTCGACAGTTCAGCAGCAGGAGGATCGA ACCAATGAGCTGTTGAAGCCAGCCACAAACAAGGACATTGCCGATGATGAGGTTGCCACATGGATTCAAGATTGC AACGACCTCCTCAAAGGACTGGGCACAGTTAAAGATTCCCTCTTTTTTCTCCATGAGCTGGGAGAGCAACTGAAG CAACAAGTGGATGCTTCCGCAGCATCAGCTATTCAATCGGATCAACTCTCTTTGAGTCAACACTTGTGTGCCCTG GAGCAAGCTCTCTGCAAACAGCAGACTTCATTACAGGCTGGAGTTCTTGATTATGAAACCTTTGCCAAGAGTTTA GAAGCTTTGGAGGCCTGGATAGTGGAAGCTGAAGAAATACTACAAGGGCAGGACCCTAGCCACTCATCTGACCTC TCCACAATCCAGGAAAGGATGGAAGAACTTAAGGGACAGATGTTAAAATTCAGCAGCATGGCTCCAGATTTAGAC CGTCTAAATGAGCTTGGATATAGGTTACCCTTGAATGATAAGGAAATCAAAAGAATGCAGAATCTGAACCGCCAT TGGTCTCTGATCTCCTCTCAGACTACAGAAAGATTCAGCAAGTTGCAGTCATTTTTGCTACAACATCAGACTTTC TATCAGCACCTTTTGGAACAGCAGAGAGCACACGAGTTGTTTCAAGCCGAGATGTTCAGTCGTCAGCAGATTTTG CACTCAATCATTATTGATGGGCAACGTCTTCTAGAACAAGGTCAAGTTGATGACAGGGATGAATTCAACCTGAAA TTGACACTCCTCAGTAATCAATGGCAGGGAGTGATTCGCAGGGCCCAGCAGAGGCGGGGGATCATTGACAGCCAG GAAGAACAGAAGAAAAACTAGCCTTCTTGTTGAAAGACTGGGAAAAATGTGAGAAAGGAATAGCAGATTCCCTG GAGAAACTACGAACTTTCAAAAAGAAGCTTTCGCAGTCTCTCCCGGATCACCATGAAGAGCTCCATGCAGAACAA ATGCGTTGCAAGGAATTAGAAAATGCAGTTGGGAGCTGGACAGATGACTTGACCCAGTTGAGCCTGCTGAAGGAC ACCCTCTCTGCCTATATCAGTGCTGATGATATCTCCATTCTTAATGAACGCGTAGAGCTTCTGCAAAGGCAGTGG GAAAAGAACAAGGAACTCTGTGAGTGGTTGACTCAAATGGAAAGCAAAGTTTCTCAGAATGGAGACATTCTCATT GAAGAAATGATAGAGAAGCTCAAGAAGGATTATCAAGAGGAAATTGCTCATTGCTCAAGAGAACAAAATACAGCTC

2309/6881 FIGURE 2123C

CAACAAATGGGAGAACGACTTGCTAAAGCCAGCCATGAAAGCAAAGCATCTGAGATTGAATACAAGCTGGGAAAG GTCAACGACCGGTGGCAGCATCTCCTGGACCTCATTGCAGCCAGGGTGAAGAAGCTGAAGGAGACCCTGGTAGCC ATAGTCTACGATTCCTGTAACTCGGAAGAATACAGAGAAAGCTTAATGAGCAGCAGGAGCTTCAGAGAGACATA GAGAAGCACAGTACAGGTGTTGCATCTGTCCTCAACCTGTGTGAAGTCCTGCACGACGACTGTGACGCCTGTGCC ACTGATGCCGAGTGTGACTCTATACAGCAGGCTACGAGAAACCTGGACCGGCGGTGGAGAAACATTTGTGCTATG TCCATGGAAAGGAGGCTGAAAATCGAAGAGACGTGGCGATTGTGGCAGAAATTTCTGGATGACTATTCACGTTTT GAAGATTGGCTGAAGTCTTCAGAAAGGACAGCTGCTTTTCCCAGCTCTTCTGGGGTGATCTATACAGTTGCCAAG GAAGAACTAAAGAAATTTGAGGCTTTCCAGCGACAGGTCCACGAGTGCCTGACGCAGCTGGAACTGATCAACAAG CAGTACCGCCGCCTGGCCAGGGAGAACCGCACTGATTCAGCATGTAGCCTCAAACAGATGGTTCACGAAGGCAAC CAGAGATGGGACAACCTGCAAAAGCGTGTCACCTCCATCTTGCGCAGACTCAAGCATTTTATTGGCCAGCGTGAG GAGTTTGAGACTGCGCGGGACAGCATTCTGGTCTGGCTCACAGAGATGGATCTGCAGCTCACTAATATTGAACAT TTTTCTGAGTGTGATGTTCAAGCTAAAATAAAGCAACTCAAGGCCTTCCAGCAGGAAATTTCACTGAACCACAAT AAGATTGAGCAGATAATTGCCCAAGGAGAACAGCTGATAGAAAAGAGTGAGCCCTTGGATGCAGCGATCATCGAG GAGGAACTAGATGAGCTCCGACGGTACTGCCAGGAGGTCTTCGGGCGTGTGGAAAGATACCATAAGAAACTGATC CGCCTGCCTCTCCCAGACGATGAGCACGACCTCTCAGACAGGGAGCTGGAGCTGGAAGACTCTGCAGCTCTGTCG GACCTGCACTGGCACGACCGCTCTGCAGACAGCCTGCTTTCTCCACAGCCTTCCTCCAATCTCTCCCTCTCGCTC GCTCAGCCCCTCCGGAGCGAGCGGTCAGGACGAGACACCCCGGCTAGTGTGGACTCCATCCCCCTGGAGTGGGAT CACGACTATGACCTCAGTCGGGACCTGGAGTCTGCAATGTCCAGAGCTCTGCCCTCTGAGGATGAAGAAGGTCAG GATGACAAAGATTTCTACCTCCGGGGAGCTGTTGGCTTATCAGGGGACCACAGTGCCCTAGAGTCACAGATCCGA CAACTGGGCAAAGCCCTGGATGATAGCCGTTTTCAGATACAGCAAACCGAAAATATCATTCGCAGCAAAACTCCC ACGGGGCCGGAGCTAGACACCAGCTACAAAGGCTACATGAAACTGCTGGGCGAATGCAGTAGCAGTATAGACTCC GTGAAGAGTGGAGCACAAACTGAAGGAGGAAGAGGAGGCCTTCCTGGCTTTGTTAACCTGCATAGTACCGAA ACCCAAACGGCTGGTGTGATTGACCGATGGGAGCTTCTCCAGGCCCAGGCATTGAGCAAGGAGTTGAGGATGAAG GAGTTGGAACAGCTCCAGCGTCTGGAACTCAGCACTGACATCCAGACCATCGAGCTCCAGATCAAAAAGCTCAAG GAGCTCCAGAAAGCTGTGGACCACCGCAAAGCCATCATCCTCTCCATCAATCTCTGCAGCCCTGAGTTCACCCAG GCTGACAGCAAGGAGACCGGGACCTGCAGGATCGCTTGTCGCAGATGAATGGGCGCTGGGACCGAGTGTGCTCT CTGCTGGAGGAGTGCCGGGGCCTGCTGCAGGATGCCCTGATGCAGTGCCAGGGTTTCCATGAAATGAGCCATGGT TTGCTTCTTATGCTGGAGAACATTGACAGAAGGAAAAATGAAATTGTCCCTATTGATTCTAACCTTGATGCAGAG ATACTTCAGGACCATCACAAACAGCTTATGCAAATAAAGCATGAGCTGTTGGAATCCCAACTCAGAGTAGCCTCT TTGCAAGACATGTCTTGCCAACTACTGGTGAATGCTGAAGGAACAGACTGTTTAGAAGCCAAAGAAAAAGTCCAT GTTATTGGAAATCGGCTCAAACTTCTCTTGAAGGAGGTCAGTCGTCATATCAAGGAACTGGAGAAGTTATTAGAC GTGTCAAGTAGTCAGCAGGATTTGTCTTCCTGGTCTTCTGCTGATGAACTGGACACCTCAGGGTCTGTGAGTCCC ACATCAGGAAGGAGCACCCCAAACAGACAGAAAACGCCACGAGGCAAGTGTAGTCTCTCACAGCCTGGACCCTCT GGCCGCGGCTTCCTGTTCAGAGTCCTCCGAGCAGCTCTTCCCCTTCAGCTTCTCCTGCTCCTCATCGGGCTT GCCTGCCTTGTACCAATGTCAGAGGAAGACTACAGCTGTGCCCTCTCCAACAACTTTGCCCGGTCATTCCACCCC ATGCTCAGATACACGAATGGCCCTCCTCCACTCTGAACTAAGCAGATGCCATCTGCAGAAGTGCTGGTAGCATAA GGAGGATCGGGTCATAAGCAATCCCAAACTACCAACAAGAGGACCTTGATCTTGGCGAAAGCCCTCGGTGTGGCA GCTTTAGCCCTCCAGATCACATGTGTGCAAATTATGGCTTCAGAGGTGGAAGATAAACAGTGACGGGGGAAC AAACAGACAACAAGAAGGTTTGGAAGAAATCTGGTTTGAGACTCTGAACCTTAGCACTAAGGAGATTGAGTAAGG ACCTCCAAAGTTCCCCGGACTCATGAATTCTGGGCCCTTGGCCCATTCTGTGCACAGCCAAGGACTTCAGTAGAC CATCTGGGCAGCTTTCCCATGGTGCTGCTCCAACCATCAGATAAATGACCCTCCCAAGCACCATGTCAGTGTCGT ACAATCTACCAACCAGCGCGCGAAGAGATTTTAGAACCTTGTAACAATTTTTAAGAGCTTATATGGCA GCTTCCTTTTTACCTTGTTTTCCTTTGGGGCATGATGTTTTAACCTTTGCTTTAGAAGCACAAGCTGTAAATCTA **AAGTTGAATGTTATAGT**

2310/6881 FIGURE 2124A

CCCGCCGCCCTCGGCAGCCCGCGTCCCGTGTCCCCTGAGAACCAGCCGTCCCGCGCCATGGGCACGCGTCTGCCG CTCGTCCTGCGCCAGCTCCGCCCCCCCCCCCCGGCCCTCCGCGCCCTCCGTGTGCCCTGTCGCGCT GCCCGGAGCAGCTGCAGCCCCGGCGGCCGAACGCCCGCGGGGGGGCTCCATCGTCAGAAAGTCATTCAGAAT CCTCCAGATAGCAGTGAAGCCGAGATTATAGATGAAATCTTAAAGATCAATGAAGATACCAGAGTACATGGCCTT GTAACAGACATAAACCTGGGGAAGCTGGTGCGAGGGGATGCCCATGAATGTTTTGTTTCACCTGTTGCCAAAGCT GTAATTGAACTTCTTGAAAAATCAGTAGGTGTCAACCTAGATGGAAAGAAGATTTTGGTAGTGGGGGCCCATGGG TCTTTGGAAGCTGCTCTACAATGCCTGTTCCAGAGAAAAGGGTCCATGACAATGAGCATCCAGTGGAAAACACGC ${\tt CAGCTTCAAAGCAAGCTTCACGAGGCTGACATTGTGGTCCTAGGCTCACCTAAGCCAGAAGAGATTCCCCTTACT}$ TGGATACAACCAGGAACTACTGTTCTCAACTGCTCCCATGACTTCCTGTCAGGGAAGGTTGGGTGTGGCTCTCCA AGAATACATTTTGGTGGACTCATTGAGGAAGATGATGTGATTCTCCTTGCTGCAGCTCTGCGAATTCAGAACATG GTCAGTAGTGGAAGGAGATGGCTTCGTGAACAGCAGCACAGGCGGTGGAGACTTCACTGCTTGAAACTTCAGCCT CTCTCCCCTGTGCCAAGTGACATTGAGATTTCAAGAGGACAAACTCCAAAAGCTGTGGATGTCCTTGCCAAGGAG ATTGGATTGCTTGCAGATGAAATTGAAATCTATGGCAAAAGCCAAAGCCAAAGTACGTTTGTCCGTGCTAGAAAGG TTAAAGGATCAAGCAGATGGAAAATACGTCTTAGTTGCTGGGATCACACCCCACCCTCTTGGAGAAGGGAAGAGC ACAGTCACCATCGGGCTTGTGCAGGCTCTGACCGCACACCTGAATGTCAACTCCTTTGCCTGCTTGAGGCAGCCT TCCCAAGGACCGACGTTTGGAGTGAAAGGAGGAGCCGCGGGTGGTGGATATGCCCAGGTCATCCCCATGGAGGAG AGGATTCTTCATGAAAACACGCAAACAGATAAGGCTCTGTATAATCGGCTGGTTCCTTTAGTGAATGGTGTCAGA GAGGAAGTGAGTAAATTTGCCCGTCTCGACATCGACCCATCTACCATCACGTGGCAGAGAGTATTGGATACAAAT GACCGATTTCTACGAAAAATAACCATCGGGCAGGGAAACACAGAGAAGGGCCCATTACCGGCAGGCGCAGTTTGAC GTTTTGATGAAAGATGCAATAAAACCAAACCTGATGCAGACCCTGGAAGGGACACCTGTGTTCGTGCATGCGGGC GGATTTGTAGTGACCGAAGCTGGCTTTGGTGCTGACATCGGAATGGAGAAATTCTTCAACATCAAGTGCCGAGCT TCCGGCTTGGTGCCCAACGTGGTTGTGTTAGTGGCAACGGTGCGAGCTCTGAAGATGCATGGAGGCGGGCCAAGT GTAACGGCTGGTGTTCCTCTTAAGAAAGAATATACAGAGGAGAACATCCAGCTGGTGGCAGACGGCTGCTGTAAC CTCCAGAAGCAAATTCAGATCACTCAGCTCTTTGGGGTTCCCGTTGTGGTGGCTCTGAATGTCTTCAAGACCGAC ACCCGCGCTGAGATTGACTTGGTGTGTGAGCTTGCAAAGCGGGCTGGTGCCTTTGATGCAGTCCCCTGCTATCAC TGGTCCGTTGGTGGAAAAGGATCGGTGGACTTGGCTCGGGCTGTGAGAGAGGCTGCGAGTAAAAGAAGCCGATTC CAGTTCCTGTATGATGTTCAGGTTCCAATTGTGGACAAGATAAGGACCATTGCTCAGGCTGTCTATGGAGCCAAA GATATTGAACTCTCTCCTGAGGCACAAGCCAAAATAGATCGTTACACTCAACAGGGTTTTGGAAATTTGCCCATC TGCATGGCAAAGACCCACCTTTCTCTATCTCACCAACCTGACAAAAAAGGTGTGCCAAGGGACTTCATCTTACCT ATCAGTGACGTCCGGGCCAGCATAGGCGCTGGGTTCATTTACCCTTTGGTCGGAACGATGAGCACCATGCCAGGA CTGCCCACCCGGCCCTGCTTTTATGACATAGATCTTGATACCGAAACAGAACAAGTTAAAGGCTTGTTCTAAGTG GACAAGGCTCTCACAGGACCCGATGCAGACTCCTGAAACAGACTACTCTTTGCCTTTTTGCTGCAGTTGGAGAAG AAACTGAATTTGAAAAATGTCTGTTATGCAATGCTGGAGACATGGTGAAATAGGCCAAAGATTTCTTCTTCGTTC AAGATGAATTCTGTTCACAGTGGAGTATGGTGTTCGGCAAAAGGACCTCCACCAAGACTGAAAGAACTAATTTA TTTCTGTTTCTGTGGAGTTTCCATTATTTCTACTGCTTACACTTTAGAATGTTTATTTTATGGGGACTAAGGGAT TAGGAGTGTGAACTAAAAGGTAACATTTTCCACTCTCAAGTTTTCTACTTTGTCTTTGAACTGAAAATAAACATG

2311/6881 FIGURE 2124B

GATCTAGAAAACC

MVSSGRRWLREQQHRRWRLHCLKLQPLSPVPSDIEISRGQTPKAVDVLAKEIGLLADEIEIYGKSKAKVRLSVLE RLKDQADGKYVLVAGITPTPLGEGKSTVTIGLVQALTAHLNVNSFACLRQPSQGPTFGVKGGAAGGGYAQVIPME EFNLHLTGDIHAITAANNLLAAAIDTRILHENTQTDKALYNRLVPLVNGVREFSEIQLARLKIIRNWE WO 2004/030615 PCT/US2003/028547

2313/6881 FIGURE 2126

 $\underline{\mathbf{G}}$ GCCTGGAAATCCGGCGCGCCCAGCCACTCGGAGCTAATCCACAATCTCCGCAAAAATGGAATCATCAAGACAGA TAAAGTATTTGAAGTGATGCTGGCTACAGACCGCTCCCACTATGCAAAATGTAACCCATACATGGATTCTCCACA GCATGAAGGAGCTAAAGCTCTTGATGTAGGATCTGGAAGTGGAATCCTTACTGCATGTTTTGCACGTATGGTTGG CGATCCAACACTTCTGTCTTCAGGGAGAGTACAGCTTGTTGTGGGGGATGGAAGAATGGGATATGCTGAAGAAGC CCCTTATGATGCCATTCATGTGGGAGCTGCAGCCCCTGTTGTACCCCAGGCGCTAATAGATCAGTTAAAGCCCGG AGGAAGATTGATATTGCCTGTTGGTCCTGCAGGCGGAAACCAAATGTTGGAGCAGTATGACAAGCTACAAGATGG CAGCATCAAAATGAAGCCTCTGATGGGGGTGATATACGTGCCTTTAACAGATAAAGAAAAGCAGTGGTCCAGGTG TGGACTTTGTTACACTGTTATTTTCAGCATGAAAATGTGTGTTTTTTTAGGGTTTCTGATTCTTCAAAGAGGCAC AGAGCCAAATTGGTAGAGGAAGGATGCAAAGTATAAATTTGTGTAATATTACTTTAACATGCCCATATTTTACTT GGAAATATTAAAAGAAAGGGTTCTGTAAAATGGAAAACTTAGTTTGTGAATTGATTTTGAGGAGTGGTTTTTCTT TTCTTGGACACTTAATTCTGTTCTGATATTAATTTATCAGATTGCTTTTGTGCATTGGATAACACCACCATTCAC TTTGATGTGGTGTCATAGAATAGCATGTTGTAGATACAATCAGCTGCTTTGTTACCTTAAAACTAGGCATTTGTA AATATTAAACCTTAAGATGGCAGGTGATGTCCTGTAAACACTCAGCTGTTCAGATTGGACATAACTGACTTAGTT CTTCCCTTCTCTCTCTCAAAATTATAGGAGACTTGTAGTTTAGTGTGGTTTTCTGTTTCTAATTTGCTGCTGA TAATGTATATGAACTTAACATGCTGTGTAAGCTGTGTCCTAGTTCTTGAACAGTTTATGCAGTGCTGCTTTGCCA AATAAAGTTAAAAGTAAAAGAGGC

 ${\tt MAWKSGGASHSELIHNLRKNGIIKTDKVFEVMLATDRSHYAKCNPYMDSPQSIGFQATISAPHMHAYALELLFDQLLEGAKALDVGSGSGILTACFARMVGCTGKVIGIDHIKELVDDSVNNVRKDDPTLLSSGRVQLVVGDGRMGYAEEAPYDAIHVGAAAPVVPQALIDQLKPGGRLILPVGPAGGNQMLEQYDKLQDGSIKMKPLMGVIYVPLTDKEKQWSRWK}$

2315/6881 FIGURE 2128A

ACTCTGGCAAGTTGCGGGCGCGGGGAGCTGTCGCGGGCAGCGCCCTCGGGAGGACGTGGCCCCGGCCCCCG CCCGCAGTGGGCCCGACCCTCATGGCCCTGAGCAAAGGGCTGCGGCTGCTGGGGCCCTGGGGGCCCGAGGGGGGAC CCAGAAGAAAAGGAAGTCATTAAAGGACAGTATGGCAAGCTCACGGACGCGTACGGCTGCCTGGGGGAGCTGAGG CTGAAATCTGGTGGCACGTCTCTGAGCTTCCTGGTGTTGGTGACAGGCTGCACATCTGTGGGCAGAATTCCAGAT GCTGAAATCTACAAAATCACTGCCACTGACTTTTACCCTCTTCAGGAAGAGGCCAAGGAGGAGGAACGCCTCATA GCTTTGAAGAAAATCCTCAGCTCGGGGGTGTTCTATTTCTCATGGCCAAACGATGGGTCTCGCTTTGACCTGACT GTCCGCACGCAGAAGCAGGGGGATGACAGCTCTGAATGGGGGAACTCCTTCTTCTGGAACCAGCTGTTGCACGTG CCCTTGAGGCAGCACCAGGTGAGCTGCTGTGACTGCTGAAGATCATCTGCGGGGTGGTCACCATCCGCACC GTGTATGCCTCCCACAAGCAGGCCAAGGCCTGCCTCGTCTCTCGCGTTAGCTGTGAGCGCACAGGCACTCGCTTC CACACCCGTGGCGTGAACGACGACGGCCATGTGTCCAACTTCGTGGAGACAGAGCAGATGATTTACATGGACGAT GGAGTGTCATCTTTTGTCCAGATCAGAGGCTCCGTTCCGCTGTTCTGGGAACAGCCAGGGCTTCAGGTTGGCTCC CATCATCTGAGACTCCACAGAGGCCTGGAAGCCAATGCCCCTGCTTTCGACAGGCACATGGTGCTTCTGAAGGAG CAGTACGGGCAGCAGGTGGTCGTGAACCTTCTGGGAAGCAGAGGCGGAGAGGAGGTGCTCAACAGAGCCTTCAAG AAGCTGCTCTGGGCTTCTTGCCACGCGGGCGACACGCCTATGATCAATTTTGACTTCCATCAGTTTGCCAAAGGT GGGAAGCTAGAGAAATTGGAGACCCTCTTGAGGCCACAGTTAAAGCTGCACTGGGAAGACTTCGATGTGTTCACA AAGGGGGAAACGTCAGTCCACGTTTTCAGAAAGGCACTTTGCGGATGAACTGTCTTGACTGCCTGGACCGAACC AACACTGTGCAGAGCTTCATCGCGCTCGAGGTCCTGCATCTGCAGCTCAAGACCCTGGGGCTGAGTTCAAAACCC ATCGTTGACCGCTTTGTGGAGTCCTTCAAAGCCATGTGGTCTCTGAATGGCCACAGCCTGAGCAAGGTGTTCACA GGCAGCAGAGCCCTGGAAGGGAAGGCCAAGGTGGGGAAGCTGAAGGATGGAGCCCGGTCCATGTCTCGAACCATC GTGGCAGACAAAGGGGGCATGCTGCTGGACAGCACGGCGCTCCTGGTGACTCCCAGGATCCTGAAAGCTATGACT GAGCGTCAGTCCGAATTCACAAATTTCAAGCGGATCCGGATTGCTATGGGGACCTGGAACGTGAACGGAGGAAAG CAGTTCCGGAGCAACGTGCTCAGGACGGCGGAGCTGACAGACTGGCTGCTCGACTCGCCCCAGCTCTCGGGAGCT ACCGACTCCCAGGATGACAGCAGCCCAGCTGACATATTTGCTGTGGGGTTTGAAGAGATGGTGGAATTGAGCGCA GGGAATATTGTCAATGCCAGTACTACCAACAAGAAGATGTGGGGTGAACAGCTTCAGAAAGCCATCTCACGCTCT CCGTTCATCAGGGACGTAGCCATCGACACTGAAGACGGGCATGGGGGGCAAGGCGGGGAACAAGGGCGCCGTC GGCATCCGCTTCCAGTTCCACAGCACCAGCTTCTGCTTCATATGTAGTCACCTGACGGCCGGGCAGTCCCAGGTG AAGGAGCGGAATGAAGACTACAAGGAGATCACCCAGAAACTCTGCTTCCCAATGGGGAGAAATGTTTTTTCTCAT CGCCAAGACTGGAAGAAACTTCTGGAATTTGATCAACTACAGCTACAGAAATCAAGTGGAAAAATTTTTTAAGGAC TTTCACGAAGGAGCCATTAACTTTGGACCCACCTACAAGTATGACGTTGGCTCAGCCGCCTACGATACAAGCGAC AAATGCCGCACCCCGCCTGGACAGACAGGGTGCTGTGGTGGAGGAAGAACATCCCTTTGATAAAACAGCTGGA GAACTCAACCTTCTAGACAGTGATCTAGATGTTGACACCAAAGTCAGACACACCTGGTCTCCTGGTGCCCTGCAG TATTATGGTCGTGCGGAGCTACAAGCGTCTGATCACAGACCTGTGCTGGCGATCGTGGAGGTGGAAGTTCAGGAA GTCGATGTGGGTGCTCGGGAGGGGTTTTCCAGGAAGTGTCCTCCTTCCAGGGCCCCCTGGATGCCACTGTTGTA GTAAACCTTCAATCACCGACCTTAGAAGAGAAAAACGAGTTTCCAGAGGACCTGCGTACTGAGCTCATGCAGACC TTGGGGAGTTATGGGACAATTGTTCTTGTCAGGATCAACCAAGGGCAGATGCTGGTAACTTTTGCAGACAGTCAC TCGGCTCTCAGTGTCCTGGACGTGGACGGTATGAAGGTGAAAGGCAGAGCAGTGAAGATTAGACCGAAGACCAAG GACTGGCTGAAAGGTTTGCGAGAGGAGATCATTCGGAAACGAGACAGCATGGCCCCCGTGTCTCCCACTGCCAAC TCCTGTTTGCTGGAGGAAAACTTTGACTTCACAAGTTTGGACTATGAGTCAGAAGGGGATATTCTTGAAGACGAT GAAGACTACTTGGTGGATGAATTCAATCAGCCTGGAGTCTCGGACAGTGAACTCGGGGGAGACGACCTCTCTGAT GTCCCGGCCCCACAGCACTGCTCCCCAGCAAGTCACCTGCTCTCACCAAAAAGAAGCAGCATCCAACGTAC AAAGATGACGCGGACCTGGTGGAGCTCAAGCGGGAGCTGGAAGCCGTCGGGGAGTTCCGCCACCGTTCTCCGAGC GTGAAAAAGTCGGCTTCAGATGCGTCCATCTCCTCCGGCACCCATGGACAGTATTCAATTTTGCAGACGGCAAGA CTTCTACCAGGAGCACCTCAGCAACCTCCCAAGGCTCGGACTGGAATAAGTAAACCTTATAATGTCAAGCAGATC

2316/6881 FIGURE 2128B

AAAACCACCAATGCCCAGGAGGCAGAAGCAGCAATCCGGTGTCTCCTGGAAGCCAGAGGAGGTGCCTCCGAAGAA GCCCTAAGTGCCGTGGCCCCAAGGGACCTTGAAGCATCCTCTGAACCAGAGCCCACACCGGGGGCAGCCAAACCA AGAAGGACAGGAAAGCCCCTGTCACCGGAAGAACAGTTTGAGCAACAGACTGTCCATTTTACAATCGGGCCCCCG GAGACAAGCGTTGAGGCCCCTCCTGTCGTGACAGCCCCTCGAGTCCCTCCTGTTCCCAAACCAAGAACATTTCAG CCTGGGAAAGCTGCAGAGAGGCCAAGCCACAGGAAGCCAGCATCAGACGAAGCCCCTCCTGGGGCAGGAGCCTCT GTGCCACCACCTCTGGAGGCGCCCCTCTTGTGCCCAAGGTACCCCCGAGGAGGAAGAAGTCAGCCCCCGCAGCC TTCCACCTGCAGGTCCTGCAGAGCAACAGCCAGCTTCTCCAGGGCCTCACTTACAATAGCAGTGACAGCCCCTCT GGGCACCCACCTGCCGCGGCACCGTCTTCCCACAAGGGGACTTTCTCAGCACTTCATCTGCTACAAGCCCCGAC AGCGATGGCACCAAAGCGATGAAGCCAGAGGCAGCCCCACTTCTTGGTGATTATCAGGACCCCTTCTGGAACCTT CTTCACCACCCTAAACTGTTGAATAACACTTGGCTTTCTAAGAGCTCAGACCCTTTGGACTCAGGAACCAGGAGC CCCAAAAGAGATCCCATAGACCCAGTGTCAGCTGCGCTTCAGCTGCCAAGGCAGAGCTGCCACCAGATCATGAA CACAAAACCTTAGGTCACTGGGTGACAATCAGTGACCAAGAAAAGAGGACAGCACTGCAGGTGTTTGACCCACTG CACCAGAAGAGACATCTATTTAAAGGCACACTGGCCAAAACGTTTGTGCATCTGTCACTCTCGTGTAGTTTACAA AAATCGTGTCTCTTATTCAGTAAGATGGTTACTCAGCCACCAAAATATATTTCACTCAAGGCTTGTACATCTGAA GTTTGCTCTTCAAGGAATGGGAACCTTCCTGTTAAATTCGGTGTATGGATTTTAAGAAAGGAATCTAGCCAATGA GGTCCAAGAAGTTCTCACCCATTGAATTTTTAAATGGCTGTTCAGTTCATGTTGTACGTGATGGAGATTTGTCTT TTGTTTTATTTGCATTTTACAGATTTGGTATAACATTTTGGGGAGCCACCTGAAGGTTGATGTATAAAGTAAGGA TTAGAGAAAGGGTCGTTGTGACCATTAGTAGCTGTCCTGGCCCACTTAAACAAGGTTACAAAAAAATCAGAGTCG GAAGCAGCCAAATAGGTCAACCTAATGACTAGACTGTACATTCCCATGAGCCTTCATGTTTAAGTGTGTACATGT GCGTTAACCTTGATGATGCGTGAATCCCGAGGGAGCCGGTGGCATACACCGTTAGCTTAACCTTAGCTTAAACTA GCTGAAGGCTCCTGTGCCATGTCTTAGACATTGCATGCCCTATCAATTACTATAATCCTGAGCCATGGTGTGCTA CTGAAACCAATTTTTATCCACCATCTAGTCCTTATTAAATGAAACCTCACGGATCCTTTGTTCCGCTTATATTCC ATGCATACCACATAAAAGCACACAGTGCGAAAACTCTTGCTGATACGCGATATTGATTCTCATTGTTAGAATATG GAGAGTGTTTCAGCCTCGTCTGTCCGGCTGGAGCTTCGGGATGGAAAGTGCTATGTGTCCCTGCATATAAGAATC ACCAGGCCAGTGTTTCTGGGTTTGCTTGTCTATATGTTTGTCTATATTTTTTTGCCTATACATTTTTCCCACGTTT CCAACAGCACTTCTCACCTATTCAATAACTGAAAAAGACATTACCATAGTGCTTTACATTTTTAAAGTAATGTTA CAAGGTCTGGAATCCATTTGGAGCAGATACCGTGTTTTCGCTATTTAATAAGAAGTTCAGTAGTGAAATCTTACT GTACCGCCTGTTGTATCTGGGAGCCTCGTACAGAGGCTCGCACAGCAGTGATCAAGTGTCATCCCTTACGTGACT GGGGGATGTCTGTCCTAAAAGCTGACTGCTAGGATAGTAAGGATCATCTTGCCTGGGCTATGCCACTGTCTTGTT ACCAATTAGACATCTGGAATTTCATAATTAGTTTTCATTGTCACTGTCAAGATATATTGCAGATTACTTAAATAT AAGGAATCCGTGACCCACAGAGCTAGACAGATAAGATGCATAGTTGACCAGTCATAAAAGGCGGTGTTTAGGTGA TGGTCCTTAACAGAGTTTGGGGGAGAGAGCAAGATGGGTTCCTTGGAGAAGCTGATTTGCCAAGATGCACATCGC TATTAACAGCCAGAGTCATAAATGAAATGAAATTGAÁGAATTCATTCAAATGCTCTTTTCCCTATAACCTCTTTT CTCACCAAAAAGGAGATAAATTTGAAAACAGATAAATGTAACAACCAGTCAAAGAAGCAGGGGAAAAGTAAGCTC AACACACAGAATTGTGTTGACTGGGGGAGGTGAATCACAAAAAAGTTACGAGGAGTTTAAGAGTTAAATATTATT TGATCGTGGCTGTCAAATTTAGTGAACAACATAGATTGGATTTGGAGTTGGTAGTAGGTATGGTTCTCATACCAG AGGATTCCCAGGTCAGCAGCAGGGTTGATTAAATAATCTTGACAATGAGCAGCTGCCATCTTGGGGGATTTCATT CTGTGGTTTTTTAAATGTTTCGTCTTTGATGCTACCATCCAGGGCTTCTTATTGTGACCTTGTAGCCTATTTTGT TCCTGCTGTTCTCTAACATGGTGCAGTTCACGCAGACTGGTTTAGGTACTTCACAACTCACCATTGTCTCTCTGA CCCCAAGCCTAGTCCCTTTTACATCACCATCTTCTCAGACTTCTTGCCTATTCTTAAAATATGTTTTGGTTAATG ATTGAATTAGGACATCAGCTTAAGCAATTCCTGTAACGGTTTAACGTTGTTGAAGTTCAAGGCACATAATAAAAT

2317/6881 FIGURE 2128C

 ${\tt MALSKGLRLLGRLGAEGDCSVLLEARGRDDCLLFEAGTVATLAPEEKEVIKGQYGKLTDAYGCLGELRLKSGGTS}$ LSFLVLVTGCTSVGRIPDAEIYKITATDFYPLQEEAKEEERLIALKKILSSGVFYFSWPNDGSRFDLTVRTQKQG DDSSEWGNSFFWNQLLHVPLRQHQVSCCDWLLKIICGVVTIRTVYASHKQAKACLVSRVSCERTGTRFHTRGVND DGHVSNFVETEQMIYMDDGVSSFVQIRGSVPLFWEQPGLQVGSHHLRLHRGLEANAPAFDRHMVLLKEQYGQQVV VNLLGSRGGEEVLNRAFKKLLWASCHAGDTPMINFDFHQFAKGGKLEKLETLLRPQLKLHWEDFDVFTKGENVSP $\tt RFQKGTLRMNCLDCLDRTNTVQSFIALEVLHLQLKTLGLSSKPIVDRFVESFKAMWSLNGHSLSKVFTGSRALEG$ ${\tt KAKVGKLKDGARSMSRTIQSNFFDGVKQEAIKLLLVGDVYGEEVADKGGMLLDSTALLVTPRILKAMTERQSEFT}$ $\tt NFKRIRIAMGTWNVNGGKQFRSNVLRTAELTDWLLDSPQLSGATDSQDDSSPADIFAVGFEEMVELSAGNIVNAS$ ${\tt TTNKKMWGEQLQKAISRSHRYILLTSAQLVGVCLYIFVRPYHVPFIRDVAIDTVKTGMGGKAGNKGAVGIRFQFH}$ ${\tt STSFCFICSHLTAGQSQVKERNEDYKEITQKLCFPMGRNVFSHDYVFWCGDFNYRIDLTYEEVFYFVKRQDWKKL}$ LEFDQLQLQKSSGKIFKDFHEGAINFGPTYKYDVGSAAYDTSDKCRTPAWTDRVLWWRKKHPFDKTAGELNLLDS DLDVDTKVRHTWSPGALQYYGRAELQASDHRPVLAIVEVEVQEVDVGARERVFQEVSSFQGPLDATVVVNLQSPT $\tt LEEKNEFPEDLRTELMQTLGSYGTIVLVRINQGQMLVTFADSHSALSVLDVDGMKVKGRAVKIRPKTKDWLKGLR$ EEIIRKRDSMAPVSPTANSCLLEENFDFTSLDYESEGDILEDDEDYLVDEFNQPGVSDSELGGDDLSDVPGPTAL ${\tt APPSKSPALTKKKQHPTYKDDADLVELKRELEAVGEFRHRSPSRSLSVPNRPRPPQPPQRPPPPTGLMVKKSASD}$ ASISSGTHGQYSILQTARLLPGAPQQPPKARTGISKPYNVKQIKTTNAQEAEAAIRCLLEARGGASEEALSAVAP ${\tt RDLEASSEPEPTPGAAKPETPQAPPLLPRRPPPRVPAIKKPTLRRTGKPLSPEEQFEQQTVHFTIGPPETSVEAP}$ ${\tt PVVTAPRVPPVPKPRTFQPGKAAERPSHRKPASDEAPPGAGASVPPPLEAPPLVPKVPPRRKKSAPAAFHLQVLQ}$ ${\tt SNSQLLQGLTYNSSDSPSGHPPAAGTVFPQGDFLSTSSATSPDSDGTKAMKPEAAPLLGDYQDPFWNLLHHPKLL}$ NNTWLSKSSDPLDSGTRSPKRDPIDPVSAGASAAKAELPPDHEHKTLGHWVTISDQEKRTALQVFDPLAKT

AGGCAGGCGGGCGGCGCTCTAAGGGTTCTGCTCTGACTCCAGGTTGGGACAGCGTCTTCGCTGCTGCTGGATA ATGGATGCAGAGCTGGAGTTTGCAATCCAGCCAAATACAACTGGAAAACAGCTTTTTGATCAGGTGGTAAAGACT ATCGGCCTCCGGGAAGTGTGGTACTTTGGCCTCCACTATGTGGATAATAAAGGATTTCCTACCTGGCTGAAGCTG GATAAGAAGGTGTCTGCCCAGGAGGTCAGGAAGGAGAATCCCCTCCAGTTCAAGTTCCGGGCCAAGTTCTACCCT AGCGATGAGATCTACTGCCCCCTGAGACTGCCGTGCTCTTGGGGTCCTACGCTGTGCAGGCCAAGTTTGGGGAC TACAACAAAGAAGTGCACAAGTCTGGGTACCTCAGCTCTGAGCGGCTGATCCCTCAAAGAGTGATGGACCAGCAC AAACTTACCAGGGACCAGTGGGAGGACCGGATCCAGGTGTGGCATGCGGAACACCGTGGGATGCTCAAAGATAAT GCTATGTTGGAATACCTGAAGATTGCTCAGGACCTGGAAATGTATGGAATCAACTATTTCGAGATAAAAAAACAAG AAAGGAACAGACCTTTGGCTTGGAGTTGATGCCCTTGGACTGAATATTTATGAGAAAGATGATAAGTTAACCCCA AAGATTGGCTTTCCTTGGAGTGAAATCAGGAACATCTCTTTCAATGACAAAAAGTTTGTCATTAAACCCATCGAC AAGAAGGCACCTGACTTTGTGTTTTATGCCCCACGTCTGAGAATCAACAAGCGGATCCTGCAGCTCTGCATGGGC AACCATGAGTTGTATATGCGCCGCAGGAAGCCTGACACCATCGAGGTGCAGCAGATGAAGGCCCAGGCCCGGGAG ${\tt AAAGAGCAGATGATGCGCGAGAAGGAGGAGTTGATGCTGCGGCTGCAGGACTATGAGGAGAAGACAAAGAAGGCA}$ GAGAGAGAGCTCTCGGAGCAGATTCAGAGGGCCCTGCAGCTGGAGGAGGAGGAGGAGGAGCCACAGGAGGAGGAGGCC GAGCGCCTAGAGGCTGACCGTATGGCTGCACTGCGGGCTAAGGAGGAGCTGGAGAGACAGGCGGTGGATCAGATA AAGAGCCAGGAGCAGCTGCCGAGCTTGCAGAATACACTGCCAAGATTGCCCTCCTGGAAGAGGCGCGGAGG CGCAAGGAGGATGAAGTTGAAGAGTGGCACACAGGGCCAAAGAAGCCCAGGATGACCTGGTGAAGACCAAGGAG GAGCTGCACCTGGTGATGACAGCACCCCCGCCCCCACCACCCCCCGTGTACGAGCCGGTGAGCTACCATGTCCAG GAGAGCTTGCAGGATGAGGGCCCAGAGCCCACGGCTACAGCGCGGAGCTGTCTAGTGAGGGCATCCGGGATGAC CGCAATGAGGAGAAGCGCATCACTGAGGCAGAGAAGAACGAGCGTGTGCAGCGGCAGCTGCTGACGCTGAGCAGC GAGCTGTCCCAGGCCCGAGATGAGAATAAGAGGACCCACAATGACATCATCCACAACGAGAACATGAGGCAAGGC CGGGACAAGTACAAGACGCTGCGGCAGATCCGGCAGGGCAACACCCAAGCAGCGCATCGACGAGTTCGAGGCCCTG TAACAGCCAGGCCAGGACCAAGGGCAGAGGGGTGCTCATAGCGGGCGCTGCCAGCCCCGCCACGCTTGTGTCTTT AGTGCTCCAAGTCTAGGAACTCCCTCAGATCCCAGTTCCTTTAGAAAGCAGTTACCCAACAGAAACATTCTGGGC TGGGAACCAGGGAGGCGCCTGGTTTGTTTTCCCCAGTTGTAATAGTGCCAAGCAGGCCTGATTCTCGCGATTAT TCTCGAATCACCTCCTGTGTTGTGCTGGGAGCAGGACTGATTGAATTACGGAAAATGCCTGTAAAGTCTGAGTAA GAAACTTCATGCTGGCCTGTGTGATACAAGAGTCAGCATCATTAAAGGAAACGTGGCAGGACTTCCATCTGTGCC ATACTTGTTCTGTATTCGAAATGAGCTCAAATTGATTTTTTAATTTCTATGAAGGATCCATCTTTGTATATTTAC TTTGTTTTTTTTTTTTGCTTAACAGTTTTAGAATACATTGTACTTATACACCTTATTAATGATCAGCTATATA CTATTTATATACAAGTGATAATACAGATTTGTAACATTAGTTTTAAAAAGGGAAAGTTTTGTTCTGTATATTTTG TTACCTTTTACAGAATAAAAGAATTACATATGAAAAACCCTCTAAACCATGGCACTTGATGTGATGTGGCAGGAG GGCAGTGGTGGAGCTGGACCTGCTGCAGTCACGTGTAAACAGGATTATTATTAGTGTTTTATGCATGTAAT GGACTATGCACACTTTTAATTTTGTCAGATTCACACATGCCACTATGAGCTTTCAGACTCCAGCTGTGAAGAGAC TCTGTTTGCTTGTTTGTTTGCAGTCTCTCTCTCCCATGGCCTTGGCAGGCTGCTGGAAGGCAGCTTGTG GAGGCCGTTGGTTCCGCCCACTCATTCCTTCTCGTGCACTGCTTTCTCCTTCACAGCTAAGATGCCATGTGCAGG TGGATTCCATGCCGCAGACATGAAATAAAAGCTTTGCAAAGGCA

2320/6881 FIGURE 2131

FIGURE 2132

GGCAGCGCAGGCAGACGCCGGCAGGAGAAGCAAGATGAATGCAGGCTCAGATCCTGTGGTCATCGTCTCGGCGG ${\tt CGCGGACCATCATAGGTTCCTTCAATGGTGCCTTAGCTGCTGTTCCTGTCCAGGACCTGGGCTCCACTGTCATCA}$ AAGAAGTCTTGAAGAGGGCCACTGTGGCTCCGGAAGATGTCTCTGAGGTCATCTTTGGACATGTCTTGGCAGCAG GCTGTGGGCAGAATCCTGTTAGACAAGCCAGTGTGGGTGCAGGAATTCCCTACTCTGTTCCAGCATGGAGCTGCC AGATGATCTGTGGGTCAGGCCTAAAAGCTGTGTGCCTTGCAGTCCAGTCAATAGGGATAGGAGACTCCAGCATTG TGGTTGCAGGAGGCATGGAAAATATGAGCAAGGCTCCTCACTTGGCTTACTTGAGAACAGGAGTAAAGATAGGTG AGATGCCACTGACAGTATACTCTGTGATGGTCTTACAGATGCATTTCACAACTGTCATATGGGTATTACAG $\tt CTGAAAATGTAGCCAAAAAATGGCAAGTGAGTAGAGAAGATCAGGACAAGGTTGCAGTTCTGTCCCAGAACAGGA$ CAGAGAATGCACAGAAAGCTGGCCATTTTGACAAAGAGATTGTACCAGTTTTGGTGTCAACTAGAAAAGGTCTTA TTGAAGTTAAAACAGATGAGTTTCCTCGCCATGGGAGCAACATAGAAGCCATGTCCAAGCTAAAGCCTTACTTTC TTACTGATGGAACGGGAACAGTCACCCCAGCCAATGCTTCAGGAATAAATGATGGTGCTGCAGCTGTCGTTCTTA ${\tt TGAAGAAGTCAGAAGCTGATAAACGTGGGCTTACACCTTTAGCACGGATAGTTTCCTGGTCCCAAGTGGGTGTGG}$ ATGTTGACATATTTGAAATCAATGAAGCCTTTGCAGCTGTCTCTGCTGCAATAGTTAAAGAACTTGGATTAAACC CAGAGAAGGTCAATATTGAAGGAGGGGCTATAGCCTTGGGCCACCCTCTTGGAGCATCTGGCTGTCGAATTCTTG TGACCCTGTTACACACTGGAGAGAATGGGCAGAAGTCGTGGTGTTGCAGCCCTGTGCATTGGGGGTGGGATGG ${\tt GAATAGCAATGTGTGTTCAGAGAGAA} {\tt TGA} {\tt ATTGCTTAAACTTTGAACCAACCTCAATTTCTTTTAAACTAATAAA$ GTACTAGGTTGCAATATGTGAAATCAGAGGACCAAAGTACAGATGGAAACCATTTCCTACATCACAAAAACCCAA GTTTACAGCTTGTACTTTACTTTAATGTGTAATACTCAACTCAAGGTACAAGACAATTGCATTTAACATTGTTAT AAATAAAAGGAACATCAGATCAATCATT

FIGURE 2133

MNAGSDPVVIVSAARTIIGSFNGALAAVPVQDLGSTVIKEVLKRATVAPEDVSEVIFGHVLAAGCGQNPVRQASV GAGIPYSVPAWSCQMICGSGLKAVCLAVQSIGIGDSSIVVAGGMENMSKAPHLAYLRTGVKIGEMPLTDSILCDG LTDAFHNCHMGITAENVAKKWQVSREDQDKVAVLSQNRTENAQKAGHFDKEIVPVLVSTRKGLIEVKTDEFPRHG SNIEAMSKLKPYFLTDGTGTVTPANASGINDGAAAVVLMKKSEADKRGLTPLARIVSWSQVGVEPSIMGIGPIPA IKQAVTKAGWSLEDVDIFEINEAFAAVSAAIVKELGLNPEKVNIEGGAIALGHPLGASGCRILVTLLHTLERMGR SRGVAALCIGGGMGIAMCVQRE

ACGTGTATCGCTGCCGTCAAGATGGAGGGGCCTTTGTCCGTGTTCGGTGACCGCAGCACTGGGGAAACGATCCGC TCCCAAAACGTTATGGCTGCAGCTTCGATTGCCAATATTGTAAAAAGTTCTCTTGGTCCAGTTGGCTTGGATAAA ATGTTGGTGGATGATATTGGTGATGTAACCATTACTAACGATGGTGCAACCATCCTGAAGTTACTGGAGGTAGAA CATCCTGCAGCTAAAGTTCTTTGTGAGCTGGCTGATCTGCAAGACAAAGAAGTTGGAGATGGAACTACTTCAGTG GTTATTATTGCAGCAGAACTCCTAAAAAATGCAGATGAATTAGTCAAACAGAAAATTCATCCCACATCAGTTATT AGTGGCTATCGACTTGCTTGCAAGGAAGCAGTGCGTTATATCAATGAAAACCTAATTGTTAACACAGATGAACTG GGAAGAGATTGCCTGATTAATGCTGCTAAGACATCCATGTCTTCCAAAATCATTGGAATAAATGGTGATTTCTTT TCTGTTAATATTTTGAAAGCCCATGGGAGAAGTCAAATGGAGAGTATGCTCATCAGTGGCTATGCACTCAACTGT ACAAAAATGAAGCTTGGTGTACAGGTGGTCATTACAGACCCTGAAAAACTGGACCAAATTAGACAGAGAGAATCA GATATCACCAAGGAGAGTTCAGAAGATCCTGGCAACTGGTGCCAATGTTATTCTAACCACTGGTGGAATTGAT GATATGTGTCTGAAGTATTTTGTGGAGGCTGGTGCTATGGCAGTTAGAAGAGTTTTAAAAAGGGACCTTAAACGC ATTGCCAAAGCTTCTGGAGCAACTATTCTGTCAACCCTGGCCAATTTGGAAGGTGAAGAAACTTTTGAAGCTGCA ATGTTGGGACAGGCAGAAGAAGTGGTACAGGAGAATTTGTGATGATGAGCTGATCTTAATCAAAAATACTAAG GCTCGTACGTCTGCATCGATTATCTTACGTGGGGCAAATGATTTCATGTGTGATGAGATGGAGCGCTCTTTACAT GATGCACTTTGTGTAGTGAAGAGAGTTTTGGAGTCAAAATCTGTGGTTCCCGGTGGGGGTGCTGTAGAAGCAGCC CTTTCCATATACCTTGAAAACTATGCAACCAGCATGGGGTCTCGGGAACAGCTTGCGATTGCAGAGTTTGCAAGA TCACTTCTTGTTATTCCCAATACACTAGCAGTTAATGCTGCCCAGGACTCCACAGATCTGGTTGCAAAATTAAGA GCTTTTCATAATGAGGCCCAGGTTAACCCAGAACGTAAAAATCTAAAATGGTTTGGTCTTGATTTGAGCAATGGT GAAGCTGCAATCACCATTCTTCGAATTGATGATCTTATTAAATTACATCCAGAAAGTAAAGATGATAAACATGGA TGCAATTGTCTTGTACCTTGAGTTGAGTATTACACATTAAAGTAAAGTACAAGCTGTAAACTTGGGTTTTTGTGA TGTAGGAAATGGTTTCCATCTGTACTTTGGTCCTCTGATTTCACATATTGCAACCTAGTACTTTATTAGTTTAAA AAGAAATTGAGGTTGTTCAAAGTTTAAGCAATTCATTCTCTCTGAACACACATTGCTATTCCCATCCCACCCCA ATGCACAGGGCTGCAACACCACGACTTCTGCCCATTCTCTCCAGTGTGTAACAGGGTCACAAGAATTC

GACACCCGACGCCGGGGCAGGCTGATCCACGATCCTGGGTGTGCGTAACGCCGCCTGGGGCTCCGTGGGCGAGGG ACGTGTGGGGACAGGTGCACCGGAAACTGCCAGACTGGAGAGTTGAGGCATCGGAGGCGCGAGAACAGCACTACT CCTGGAGCGGGACAGTCTTGGTCCGCGCCCTCCTCCCGGGTCTGTGCCGGGACCCGGGACCCGGGAGCCGTCGC AGGTCTCGGTCCAAGGGGCCCCTTTTCTCGGAAGGGCGGCCGACGAGAGCAGGGAAGGTGGATCTCAGGTAGCGA GAGCCTGCAGTACCGAGTGGACCACCTGCTGAGCGCCGTGGAGAATGAGCTGCAGGCGGGCAGCGAGAAGGGCGA GATGATCGTGACCAAGAACGGCAGGAGGATGTTTCCGGTGCTGAAGGTGAACGTGTCTGGCCTGGACCCCAACGC CATGTACTCCTTCCTGCTGGACTTCGTGGCGGCGGACAACCACCGCTGGAAGTACGTGAACGGGGAATGGGTGCC GGGGGGCAAGCCGGAGCCGCAGCCCAGCTGCGTCTACATCCACCCCGACTCGCCCAACTTCGGGGCCCACTG GATGAAGGCTCCCGTCTCCTTCAGCAAAGTCAAGCTCACCAACAAGCTCAACGGAGGGGGCCAGATCATGCTGAA CTCCTTGCATAAGTATGAGCCTCGAATCCACATAGTGAGAGTTGGGGGTCCACAGCGCATGATCACCAGCCACTG CTTCCCTGAGACCCAGTTCATAGCGGTGACTGCTTATCAGAACGAGGAGATCACAGCTCTTAAAATTAAGTACAA TCCATTTGCAAAAGCTTTCCTTGATGCAAAGGAAAGAAGTGATCACAAAGAGATGATGGAGGAACCCGGAGACAG CCAGCAACCTGGGTACTCCCAATGGGGGTGGCTTCTTCCTGGAACCAGCACCCTGTGTCCACCTGCAAATCCTCA GTCCTCACCCTACCCCAGCCCCTATGCTCATCGGAACAATTCTCCAACCTATTCTGACAACTCACCTGCATGTTT CAATGCCAGCCCACCTACCAGCTCAGTCAGTACCCCAGCCTGTGGTCTGTGAGCAACGGCGCCGTCACCCCGGG CTCCCAGGCAGCCGTGTCCAACGGGCTGGGGGCCCAGTTCTTCCGGGGCTCCCCCGCGCACTACACCCCCT CACCCATCCGGTCTCGGCGCCCCTCTTCCTCGGGATCCCCACTGTACGAAGGGGCCGCCGCCGCCACAGACATCGT ${\tt GGACAGCCAGTACGACGCCGCAGGCCCAAGGCCGCCTCATAGCCTCATGGACACCTGTGTCGCCACCTTCCATG{\tt TG}{\tt TG$ AAGCAGCAAGGCCCAGGTCCCGAAAGATGCAGTGACTTTTTGTCGTGGCAGCCAGTGGTGACTGGATTGACCTAC TAGGTACCCAGTGGCAGTCTCAGGTTAAGAAGGAAATGCAGCCTCAGTAACTTCCTTTTCAAAGCAGTGGAGGAG CACACGGCACCTTTCCCCAGAGCCCCAGCATCCCTTGCTCACACCTGCAGTAGCGGTGCTGTCCCAGGTGGCTTA CAGATGAACCCAACTGTGGAGATGATGCAGTTGGCCCAACCTCACTGACGGTGAAAAAATGTTTGCCAGGGTCCA GAAACTTTTTTTGGTTTATTTCTCATACAGTGTATTGGCAACTTTGGCACACCAGAATTTGTAAACTCCACCAGT CCTACTTTAGTGAGATAAAAAGCACACTCTTAATCTTCTTCCTTGTTGCTTTCAAGTAGTTAGAGTTGAGCTGTT AAGGACAGAATAAAATCATAGTTGAGGACAGCAGGTTTTAGTTGAATTGAAAATTTGACTGCTCTGCCCCCTAGA AAAGTAGCCAAAGACAATCAGCAGAAAGCATTTTCTGCAAAATAAACGCAATATGCAAAATGTGATTCGTCCAGT TATTAGTGAAGCCCCTCCTTTTGTGAGTATTTACTGTTTATTG

MSSPGTESAGKSLQYRVDHLLSAVENELQAGSEKGDPTERELRVGLEESELWLRFKELTNEMIVTKNGRRMFPVL KVNVSGLDPNAMYSFLLDFVAADNHRWKYVNGEWVPGGKPEPQAPSCVYIHPDSPNFGAHWMKAPVSFSKVKLTN KLNGGGQIMLNSLHKYEPRIHIVRVGGPQRMITSHCFPETQFIAVTAYQNEEITALKIKYNPFAKAFLDAKERSD HKEMMEEPGDSQQPGYSQWGWLLPGTSTLCPPANPHPQFGGALSLPSTHSCDRYPTLRSHRSSPYPSPYAHRNNS PTYSDNSPACLSMLQSHDNWSSLGMPAHPSMLPVSHNASPPTSSSQYPSLWSVSNGAVTPGSQAAAVSNGLGAQF FRGSPAHYTPLTHPVSAPSSSGSPLYEGAAAATDIVDSQYDAAAQGRLIASWTPVSPPSM

MLSSTAMYSAPGRDLGMEPHRAAGPLQLRFSPYVFNGGTILAIAGEDFAIVASDTRLSEGFSIHTRDSPKCYKLT DKTVIGCSGFHGDCLTLTKIIEARLKMYKHSNNKAMTTGAIAAMLSTILYSRRFFPYYVYNIIGGLDEEGKGAVY SFDPVGSYQRDSFKAGGSASAMLQPLLDNQVGFKNMQNVEHVPLSLDRAMRLVKDVFISAAERDVYTGDALRICI VTKEGIREETVSLRKD

CGAGTCGCGAAGCGCGCCTGCGACCCGGCGTCCGGGCGCGCGGAGGAGGACGCGAGGAGCCATGAGGCCCAGCC TGCGAAGGTGGCGGCGCTGCTGCTCGGGCTGCTCTTGGAGTGCACAGAAGCCAAAAAGCATTGCTGGTATTTCGA AGGACTCTATCCAACCTATTATATATGCCGCTCCTACGAGGACTGCTGTGGCTCCAGGTGCTGTGTGCGGGCCCT CTCCATACAGTGGCTGTGGTACTTCTGGTTCCTTCTGATGATGGGCGTGCTTTTCTGCTGCGGAGCCGGCTTCTT AAATCCCGGCCCAGGAGCCCAGCAGCCGGGGCCACCCTATTACACCGACCCAGGAGGACCGGGGATGAACCCTGT AGCCTACTGCAACACGCCTCCGCCCCCGTACGAACAGGTAGTGAAGGCCAAGTAGTGGGGTGCCCACGTGCAAGA GGAGAGACAGGAGAGGGCCTTTCCCTGGCCTTTCTGTCTTCGTTGATGTTCACTTCCAGGAACGGTCTCGTGGGC TGCTAAGGGCAGTTCCTCTGATATCCTCACAGCAAGCACAGCTCTCTTTCAGGCTTTCCATGGAGTACAATATAT GAACTCACACTTTGTCTCCTCTGTTGCTTCTGTTTCTGACGCAGTCTGTGCTCTCACATGGTAGTGTGGTGACAG GGAGGTGCAGGTGGCATGTAGAGGGGCCAGGCCGAGCATCCCAGGCAAGCATCCTTCTGCCCGGGTATTAATAGG $\tt CTGTCCTCTGTCAGCCTTCCTCTTCCAGAAGCTGTTGGAGAGACATTCAGGAGAGAGCCAAGCCCCTTGTCATGT$ TTCTGTCTCTGTTCATATCCTAAAGATAGACTTCTCCTGCACCGCCAGGGAAGGGTAGCACGTGCAGCTCTCACC AATTCATGGGAAATCACTTCCTGCCCCAAACTGAGACATTGCATTTTGTGAGCTCTTGGTCTGATTTGGAGAAAG GACTGTTACCCATTTTTTGGTGTGTTTATGGAAGTGCATGTAGAGCATCCTGCCCTTTGAAATCAGACTGGGTGT GTGTCTTCCCTGGACATCACTGCCTCTCCAGGTCATTCTCAGGCCCGGGGGTCTCCTTCCCTCAGGCAGCTCCAG GAGACCAGCTGAGGCGTCTCTCTCTGAGGTTGTGTTGGGTCTAAGCGGGTGTGTGCTGGGCTCCAAGGAGGAGGA GCTTGCTGGGAAAAGACAGGAGAAGTACTGACTCAACTGCACTGACCATGTTGTCATAATTAGAATAAAGAAGAA GTGGTTGGAAATGCACATTCCTGGATAGGAATCACAGCTCACCCCAGGATCTCACAGGTAGTCTCCTGAGTAGTT GACGGCTAGCGGGGAGCTAGTTCCGCCGCATAGTTATAGTGTTGATGTGTGAACGCTGACCTGTCCTGTGTGCTA AGAGCTATGCAGCTTAGCTGAGGCGCCTAGATTACTAGATGTGCTGTATCACGGGGAATGAGGTGGGGGTGCTTA TTTTTTAATGAACTAATCAGAGACTCTTGAGAAATTGTTACTCATTGAACTGGAGCATCAAGACATCTCATGGAA ATGGATACGGAGTGATTTGGTGTCCATGCTTTTCACTCTGAGGACATTTAATCGGAGAACCTCCTGGGGAATTTT GTGGGAGACACTTGGGAACAAAACAGACACCCTGGGAATGCAGTTGCAAGCACAGATGCTGCCACCAGTGTCTCT GACCACCCTGGTGTGACTGCTGACTGCCAGCGTGGTACCTCCCATGCTGCAGGCCTCCATCTAAATGAGACAACA AAGCACAATGTTCACTGTTTACAACCAAGACAACTGCGTGGGTCCAAACACTCCTCTTCCTCCAGGTCATTTGTT TTGCATTTTTAATGTCTTTATTTTTTGTAATGAAAAAGCACACTAAGCTGCCCCTGGAATCGGGTGCAGCTGAAT AGGCACCCAAAAGTCCGTGACTAAATTTCGTTTGTCTTTTTGATAGCAAATAATGTTAAGAGACAGTGATGGCTA TACTGTGAACGCTGATCCTGCATATGGAAGTCCCACTTCGGTGACATTTCCTGGCCATTCTTGTTTCCATTGTGT GGATGGTGGGTTGTGCCCACTTCCTGGAGTGAGACAGCTCCTGGTGTGTAGAATTCCCGGAGCGTCTGTGGTTCA

ATGGCAGGGGAGTCACAAAGGAGAAGCACTCAGCCTGCCGAGAGGTCCCAGGACTTTCCTGGAGGATCAGTCCCC AAACTGACTGTGACAGGAGATAACACAGAAAAAGAGCCCAGAATAAGAAAAGAGTCTGTAGATGGCAAG TCAATGGGAAATCATTCCAGGAAGGTAGGGAAAGATTCTGGAGAGCATTGGACCTCAGATTGGGAGTCTG AACGTCTTTCCATATGCATCAGGAAGCCATGGAAAATTCACAGACTGGAGTGACTTTTGGCAAAGGAACAACATAT AACGCACTCTCCCCTGAACTCTACACAACATATTTTTGTCACCAAGACCCTACTTCTGACCTCCCTGTTCTTATGC ATTCGAACAGCATACCCCCGATTCCGCTACGACCAACCTCATACACCTCCTATGA

FIGURE 2141

TTAAATACAAATTACCACCTACCTCCCTCACCAAAGCCCATAAAAATAAAAAACTATAACAAACCTGAGAACCA AAATGAACGAAAATCTGTTCACTTCATTCATTGCCCCCACAATCCTAGGCCTACCGCCGCAGTACTGATCATTC TATTTCCCCCTCTATTGATCCCCACCTCCAAATATCTCATCAACAACCGACTAATTACCACCCAACAATGACTAA TCCAACTAACCTCAAAACAAATGATAGCCATACACAACACTAAGGGACGAACCTGATCTCTTATACTAGTATCCT TAAACCTAGCCATGGCCATCCCCTTATGAGCGGGCGCAGTGATTATAGGCTTTCGCTCTAAGATTAAAAATGCCC TAGCCCACTTCTTACCACAAGGCACACCTACACCCCTTATCCCTATACTAGTTATTATCGAAACCATCAGCCTAC TCATTCAACCAATAGCCCTGGCCGTACGCCTAACCGCTAACATTACTGCAGGCCACCTACTCATGCACCTAATTG GAAGCGCCACACTAGCAATATCAACTATTAACCTTCCCTCTACACTTATCATCTTCACAATTCTAATTCTACTGA CTATCCTAGAAATCGCTGTCGCCTTAATCCAAGCCTACGTTTTTACACTTCTAGTAAGCCTCTACCTGCACGACA ${\tt ACACATAATGACCCACCAATCACATGCCTATCATATAGTAAAACCCAGCCCATGGCCCCTAACAGGGGCCCTCTC}$ AGCCCTCCTAATGACCTCCGGCCTAGCCATGTGATTTCACTTCCACTCCACAACCCTCCTCATACTAGGCCTACT CCATAGTCTAATAGTCTATTTTACCCTCCTACAAGCCTCAGAGTACTTCGAG

2332/6881 FIGURE 2143

MLLPPGSLSRPRTFSSQPLQTKLMTHNGLFRPIPYLTAVSADEPTASQQPPQAQLHRYNGLFRPSSCLPAFSPGP ELSQVDLTRPSSCFFAASPGPTPASWWPLQAQPVPPVGLYNPNICLTADSSRPASASQWTLQTQMVSHCGILRRS SCLSAASPGPAPPASQWPLSAQPSSCLPAAFPSPAFDFWWPLQASTRPSLLPPEGLHRPSLCLTADSPRPASSRL TAASPVQSSCLSATSAGPATACQWPL

CTCTCTCACACACCCCCGCTTGGGCCTCCTCTCTCTCCCGGCTCCATTTTCTCCGCCGCCGGGGGCCGGGGT CTCCTGTGGGGGGCCCAGCCGGTATCCCAGGTCTCCCTTCAGTGCCGGGGTGAACCCCCGGGGGAGCCGGGAGCC GGGGCAGACGGCCGGGGTTGGGGCGGAGGGAGCAGCCGCCCCAGCGAGTTTGGGGGGGAGAAGTAACCAGGCGG TCCAGGCGGGGGCCGGGGGCCTGGGATTGGTGAGTGGGGAGCCTGGGGGGCCCTGGCGAGCCTCCCGGTGGCGG AGACCCCGGTGGGGGTAGCGGGGGGGTCCCGGGAGGCCGAGGGAAGCAAGACATCGGGGACATTCTGCAGCAGAT AATGACCATCACCGACCAGAGCCTGGACGAGGCCCAGGCCAAGAAACACGCCCTAAACTGCCACCGAATGAAGCC TGCTCTCTTTAGCGTCCTGTGTGAAATCAAGGAGAAAACTGGCCTCAGCATTCGGAGCTCCCAGGAGGAGGAGCC GGTGGACCCACAGCTGATGCGCTTGGACAACATGCTTCTGGCAGAGGGTGTGGCTGGGCCCGAGAAAGGGGGGCGG CTCAGCAGCAGCAGCTGCAGCCTCTGGTGGTGGTGTGTCCCCTGACAACTCCATCGAACACTCGGA CTATCGCAGCAAACTTGCCCAGATCCGTCACATATACCACTCGGAGCTGGAGAAGTATGAGCAGGCATGTAATGA GTTCACGACCCATGTCATGAACCTGCTGAGGGAGCAGAGCCGCACCAGGCCCGTGGCCCCCAAAGAGATGGAACG CATGGTGAGCATCATCCATCGAAAGTTCAGCGCCATCCAGATGCAGCTGAAGCAGAGCACCTGCGAGGCTGTGAT GATCCTGCGCTCCCGTTTCCTGGATGCCAGACGAAAGCGCCGTAACTTCAGCAAACAGGCCACTGAGGTCCTAAA TGAGTATTTCTACTCCCACCTGAGTAACCCATATCCTAGTGAGGAGGCCAAGGAGGAGCTTGCCAAGAAGTGTGG CATCACCGTGTCTCAGGTCTCCAACTGGTTTGGCAACAAGAGGATTCGCTATAAGAAAAACATCGGAAAGTTCCA GACACCCCTTCCTCTGCAGGTGGATCCCACTGTCACCCCAGCTGACTGTTTTGCACACTTCCTGCTTTTGTTCC CACTTCCTATCTAGGCAGGATCATAGCAGAGAGGGGGCCTTTTGGGGTGAGAGGGGACCGAGCTGAGATAGGCTGG AGATGTCAGGGGACAGAGGCCATTCCAGTGATCTTAGTTCTGCCTTTCTTCCCACGGGTGGCCAAGGAACAGCCT

GAGTAGAGTAGGGCAGGAGAAACTGGGCCAGGCTGCACTTAGCTCAAGGGGCCTCGAGGACTCTCTGCGTCTCTG GAGACAAGGGCACTACACGCACTTCAGAATGAAGAGTTGCGGGAGCATGCTGGGGGCTCTGGGGGCAGCGGCTCCC CTACAAGCCGGTCATCGTGGTGCATGGGCTCTTCGACAGCTCGTACAGCTTCCGCCACCTGCTGGAATACATCAA ACAGGTGCAAGGGTTCCGAGAGGCTGTGGTCCCCATCATGGCAAAGGCCCCTCAAGGGGTGCATCTCATCTGCTA CTCGCAGGGGGCCTTGTGTGCCGGGCTCTGCTTTCTGTCATGGATGATCACAACGTGGATTCTTTCATCTCCCT CTCCTCTCCACAGATGGGACAGTATGGAGACACGGACTACTTGAAGTGGCTGTTCCCCACCTCCATGCGGTCTAA CCTCTATCGGATCTGCTATAGCCCCTGGGGCCAGGAATTCTCCATCTGCAACTACTGGCATGATCCCCACCACGA TGACTTGTACCTCAATGCCAGCAGCTTCCTGGCCCTGATCAATGGGGAAAGAGACCATCCCAATGCCACAGTATG GCGGAAGAACTTTCTGCGTGTGGGCCACCTGGTGCTGATTGGGGGCCCTGATGATGGTGTTATTACTCCCTGGCA GTCCAGCTTCTTTGGTTTCTATGATGCAAATGAGACCGTCCTGGAGATGGAGGAGCAACTGGTTTATCTGCGGGA TTCTTTTGGGTTGAAGACTCTATTGGCCCGGGGGGCCATAGTGAGGTGTCCAATGGCCGGTATCTCCCACACAGC CTGGCACTCCAACCGTACCCTTTATGAGACCTGCATTGAACCTTGGCTCTCCTGAGGATATATTCAGGGGTCCCC AGGAACTCCTCGGTCCAGAGACCAAGTGGTGGCCTTGGAAAGCAGATGTCAGGCTTTGGTGTGCCTGTGACCACC TCATTGCTCCCATATTATCCCCCATTTTTAGTAGAGACGGGGTTTTAGTAGAGACTTGGCCTCCCAGAACCCCCT TCCTCTGCTCCTCCATGAATGACAATTCCAGGCCTCCCCTACCTCATGTCCTCTCATTTGGGGGATTGCTCCGTG AGGACATTTTTAGCTTCTCCTCCCCCATGTTCCCTTTTTTCTCTAAAGTCCCCTGACATCAGCCCTCCCAACTC CTAAGAGGGACTACCCATGAGAGTGGGGTTCTGAGGCTCCCCTATGGGGACAGTTCCGTTCTTGAAGTGTCAGTG TTGGGGAATATCTGTGGCCTATGAGGCCCATCTCAGGTTTGGGGATCCCCCAGTCCCTATGATCAGTGTTGGAGT ACCCCCTGGGAGAGCCTAGTTTCTTTGAGGCCCCAGGCCCTCTTTTAACTACCTTTGAATAGGTGTTATCCCTG TATTTATGGAAATAAAGTTCCATTTCCTC

2335/6881 FIGURE 2146A

AGAAGGTAGCAGACAGACAGACGGATCTAACCTCTCTTGGATCCTCCAGCCATGAGGCTGCTCTGGGGGCTGATC GGGGTCCCCCTATCGGTGGGGGTGCAGCTCCAGGATGTGCCCCGAGGACAGGTAGTGAAAGGATCAGTGTTCCTG AGAAACCCATCTCGTAATAATGTCCCCTGCTCCCCAAAGGTGGACTTCACCCTTAGCTCAGAAAGAGACTTCGCA CTCCTCAGTCTCCAGGTGCCCTTGAAAGATGCGAAGAGCTGTGGCCTCCATCAACTCCTCAGAGGCCCTGAGGTC CAGCTGGTGGCCCATTCGCCATGGCTAAAGGACTCTCTGTCCAGAACGACAAACATCCAGGGTATCAACCTGCTC TTCTCCTCTCGCCGGGGGCACCTCTTTTTGCAGACGGACCAGCCCATTTACAACCCTGGCCAGCGGGTTCGGTAC CTCCGCGTGCGGAAGAAGGAGGTGTACATGCCCTCGTCCATCTTCCAGGATGACTTTGTGATCCCAGACATCTCA GAGCCAGGGACCTGGAAGATCTCAGCCCGATTCTCAGATGGCCTGGAATCCAACAGCAGCACCCAGTTTGAGGTG AAGAAATATGTCCTTCCCAACTTTGAGGTGAAGATCACCCCTGGAAAGCCCTACATCCTGACGGTGCCAGGCCAT CTTGATGAAATGCAGTTAGACATCCAGGCCAGGTACATCTATGGGAAGCCAGTGCAGGGGGGGCATATGTGCGC CAGAGCCACATTTCCCTCTCAAAGGCAGAGTTCCAGGACGCCCTGGAGAAGCTGAATATGGGCATTACTGACCTC TCCTGGTATTTTGTGTCATCTCCCTTCTCCTTGGATCTTAGCAAGACCAAGCGACACCTTGTGCCTGGGGCCCCC TTCCTGCTGCAGGCCTTGGTCCGTGAGATGTCAGGCTCCCCAGCTTCTGGCATTCCTGTCAAAGTTTCTGCCACG GTGTCTTCTCCTGGGTCTGTTCCTGAAGTCCAGGACATTCAGCAAAACACAGACGGGAGCGGCCAAGTCAGCATT CCAATAATTATCCCTCAGACCATCTCAGAGCTGCAGCTCTCAGTATCTGCAGGCTCCCCACATCCAGCGATAGCC AGGCTCACTGTGGCAGCCCCACCTTCAGGAGGCCCCGGGTTTCTGTCTATTGAGCGGCCGGATTCTCGACCTCCT CGTGTTGGGGACACTCTGAACCTGAACTTGCGAGCCGTGGGCCAGTGGGGCCACCTTTTCTCATTACTACTACATG ATCCTATCCCGAGGGCAGATCGTGTTCATGAATCGAGAGCCCAAGAGGACCCTGACCTCGGTCTCGGTGTTTGTG GACCATCACCTGGCACCCTCCTTCTACTTTGTGGCCTTCTACTACCATGGAGACCACCCAGTGGCCAACTCCCTG GGGGAGTCCGTGAAGCTCCACTTAGAAACCGACTCCCTAGCCCTGGTGGCGCTGGGAGCCTTGGACACAGCTCTG TATGCTGCAGGCAGCCAGAGCCCCTCAACATGGGCAAGGTCTTTGAAGCTATGAACAGCTATGACCTC GGCTGTGGTCCTGGGGGTGGGGACAGTGCCCTTCAGGTGTTCCAGGCAGCGGGCCTGGCCTTTTCTGATGGAGAC CAGTGGACCTTATCCAGAAAGAGACTAAGCTGTCCCAAGGAGAAGACAACCCGGAAAAAGAGAAACGTGAACTTC CAAAAGGCGATTAATGAGAAATTGGGTCAGTATGCTTCCCCGACAGCCCAAGCGCTGCCAGGATGGGGTGACA CGTCTGCCCATGATGCGTTCCTGCGAGCAGCGGGCAGCCGGGTGCAGCAGCCGGACTGCCGGGAGCCCTTCCTG TCCTGCTGCCAATTTGCTGAGAGTCTGCGCAAGAAGAGCAGGGACAAGGGCCAGGCGGGCCTCCAACGAGCCCTG GAGATCCTGCAGGAGGAGCCTGATTGATGAGGATGACATTCCCGTGCGCAGCTTCTTCCCAGAGAACTGGCTC TGGAGAGTGGAACAGTGGACCGCTTTCAAATATTGACACTGTGGCTCCCCGACTCTCTGACCACGTGGGAGATC CATGGCCTGAGCCTGTCCAAAACCAAAGGCCTATGTGTGGCCACCCCAGTCCAGCTCCGGGTGTTCCGCGAGTTC CACCTGCACCTCCGCCTGCCCATGTCTGTCCGCCGCTTTGAGCAGCTGGAGCTGCGGCCTGTCCTCTATAACTAC GTGTCTCTGAAGGTGGTGGCTCGAGGGTCCTTCGAATTCCCTGTGGGAGATGCGGTGTCCAAGGTTCTGCAGATT GAGAAGGAAGGGCCATCCATAGAGAGGAGCTGGTCTATGAACTCAACCCCTTGGACCACCGAGGCCGGACCTTG GAAATACCTGGCAACTCTGATCCCAATATGATCCCTGATGGGGACTTTAACAGCTACGTCAGGGTTACAGCCTCA GGCTGTGGGGAGCAAACCATGATCTACTTGGCTCCGACACTGGCTGCTTCCCGCTACCTGGACAAGACAGAGCAG TGGAGCACACTGCCTCCCGAGACCAAGGACCACGCCGTGGATCTGATCCAGAAAGGCTACATGCGGATCCAGCAG TTTCGGAAGGCGGATGGTTCCTATGCGGCTTGGTTGTCACGGGGCAGCACCTGGCTCACAGCCTTTGTGTTG AAGGTCCTGAGTTTGGCCCAGGAGCAGGTAGGAGGCTCGCCTGAGAAACTGCAGGAGACATCTAACTGGCTTCTG TCCCAGCAGCAGGCTGACGGCTCGTTCCAGGACCTCTCTCCAGTGATACATAGGAGCATGCAGGGGGGGTTTGGTG GGCAATGATGAGACTGTGGCACTCACAGCCTTTGTGACCATCGCCCTTCATCATGGGCTGGCCGTCTTCCAGGAT GAGGGTGCAGAGCCATTGAAGCAGAGAGTGGAAGCCTCCATCTCAAAGGCAAGCTCATTTTTGGGGGAGAAAGCA

2336/6881 FIGURE 2146B

AGTGCTGGGCTCCTGGGTGCCCACGCAGCTGCCATCACGGCCTATGCCCTGACACTGACCAAGGCCCCTGCGGAC $\tt CTGCGGGGTGTTGCCCACAACAACCTCATGGCAATGGCCCAGGAGACTGGAGATAACCTGTACTGGGGCTCAGTC$ ACTGGTTCTCAGAGCAATGCCGTGTCGCCCACCCCGGCTCCTCGCAACCCATCCGACCCCATGCCCCAGGCCCCA GCCCTGTGGATTGAAACCACAGCCTACGCCCTGCTGCACCTCCTGCTTCACGAGGGCAAAGCAGAGATGGCAGAC CAGGCTGCGCCTGGCTCACCCGTCAGGGCAGCTTCCAAGGGGGGATTCCGCAGTACCCAAGACACGGTGATTGCC CTGGATGCCCTGTCTGCCTACTGGATTGCCTCCCACACCACTGAGGAGGGGTCTCAATGTGACTCTCAGCTCC ACAGGCCGGAATGGGTTCAAGTCCCACGCGCTGCAGCTGAACAACCGCCAGATTCGCGGCCTGGAGGAGGAGCTG CAGTTTTCCTTGGGCAGCAAGATCAATGTGAAGGTGGGAGGAAACAGCAAAGGAACCCTGAAGGTCCTTCGTACC TACAATGTCCTGGACATGAAGAACACGACCTGCCAGGACCTACAGATAGAAGTGACAGTCAAAGGCCACGTCGAG TACACGATGGAAGCAAACGAGGACTATGAGGACTATGAGTACGATGAGCTTCCAGCCAAGGATGACCCAGATGCC GTGGAGGAGCAGGAGTCCAGGGTGCACTACACCGTGTGCATCTGGCGGAACGGCAAGGTGGGGCTGTCTGGCATG GACCGTTACGTGAGTCACTTTGAGACCGAGGGGCCCCACGTCCTGCTGTATTTTGACTCGGTCCCCACCTCCCGG GAGTGCGTGGGCTTTGAGGCTGTGCAGGAAGTGCCGGTGGGGCTGGTGCAGCCGGCCAGCCCAACCCTGTACGAC TACTACAACCCCGAGCGCAGATGTTCTGTGTTTTACGGGGCACCAAGTAAGAGCAGACTCTTGGCCACCTTGTGT TCTGCTGAAGTCTGCCAGTGTGCTGAGGGGAAGTGCCCTCGCCAGCGTCGCCCCTGGAGCGGGGTCTGCAGGAC GAGGATGCCTACAGGATGAAGTTTGCCTGCTACTACCCCCGTGTGGAGTACGGCTTCCAGGTTAAGGTTCTCCGA GAAGACAGCAGAGCTGCTTTCCGCCTCTTTGAGACCAAGATCACCCAAGTCCTGCACTTCACCAAGGATGTCAAG GCCGCTGCTAATCAGATGCGCAACTTCCTGGTTCGAGCCTCCTGCCGCCTTCGCTTGGAACCTGGGAAAGAATAT TTGATCATGGGTCTGGATGGGGCCACCTATGACCTCGAGGGACACCCCCAGTACCTGCTGGACTCGAATAGCTGG ATCGAGGAGATGCCCTCTGAACGCCTGTGCCGGAGCACCCGCCAGCGGGCAGCCTGTGCCCAGCTCAACGACTTC CTCCAGGAGTATGGCACTCAGGGGTGCCAGGTGTGAGGGCTGCCCTCCCACCTCCGCTGGGAGGAACCTGAACCT GGGAACCATGAAGCTGGAAGCACTGCTGTGTCCGCTTTCATGAACACAGCCTGGGACCAGGGCATATTAAAGGCT TTTGGCAGCAAAGTGTCAGTGTTGGC

CTTTGAGCAGCTGGAGCTGCGGCCTGTCCTCTATAACTACCTGGATAAAAACCTGACTGTGAGCGTCCACGTGTC CCCAGTGGAGGGCTGTGCCTGGGGGGGGGGGGGGCTGGCCCAGCAGGTGCTGGTGCCTGCGGGCTCTGCCCG GCCTGTTGCCTTCTCTGTGGTGCCCACGGCAGCCACCGCTGTGTCTCTGAAGGTGGTGGCTCGAGGGTCCTTCGA ·CTATGAACTCAACCCCTTGGACCACCGAGGCCGGACCTTGGAAATACCTGGCAACTCTGATCCCAATATGATCCC TGATGGGGACTTTAACAGCTACGTCAGGGTTACAGCCTCAGATCCATTGGACACTTTAGGCTCTGAGGGGGCCTT GTCACCAGGAGGCGTGGCCTCCTCTTGAGGCTTCCTCGAGGCTGTGGGGAGCAAACCATGATCTACTTGGCTCC GACACTGGCTGCTTCCCGCTACCTGGACAAGACAGAGCAGTGGAGCACTGCCTCCCGAGACCAAGGACCACGC CGTGGATCTGATCCAGAAAGGCTACATGCGGATCCAGCAGTTTCGGAAGGCGGATGGTTCCTATGCGGCTTGGTT GTCACGGGGCAGCAGCACCTGGCTCACAGCCTTTGTGTTGAAGGTCCTGAGTTTGGCCCAGGAGCAGGTAGGAGG CTCGCCTGAGAAACTGCAGGAGACATCTAACTGGCTTCTGTCCCAGCAGCAGGCTGACGGCTCGTTCCAGGACCT CTCTCCAGTGATACATAGGAGCATGCAGGGGGGTTTGGTGGGCAATGATGAGACTGTGGCACTCACAGCCTTTGT GACCATCGCCCTTCATCATGGGCTGGCCGTCTTCCAGGATGAGGGTGCAGAGCCATTGAAGCAGAGAGTGGAAGC CTCCATCTCAAAGGCAAGCTCATTTTTGGGGGGAGAAGCAAGTGCTGGGCTCCTGGGTGCCCACGCAGCTGCCAT CACGGCCTATGCCCTGACACTGACCAAGGCCCCTGCGGACCTGCGGGGTGTTGCCCACAACAACCTCATGGCAAT GGCCCAGGAGACTGGAGATAACCTGTACTGGGGCTCAGTCACTGGTTCTCAGAGCAATGCCGTGTCGCCCACCCC GGCTCCTCGCAACCCATCCGACCCCATGCCCCAGGCCCCTGTGGATTGAAACCACAGCCTACGCCTGCT GCACCTCCTGCTTCACGAGGGCAAAGCAGAGTGGCAGACCAGGCTGCGCCTCACCCGTCAGGGCAGCTT CCAAGGGGGATTCCGCAGTACCCAAGACACGGTGATTGCCCTGGATGCCCTGTCTGCCTACTGGATTGCCTCCCA CACCACTGAGGAGAGGGGTCTCAATGTGACTCTCAGCTCCACAGGCCGGAATGGGTTCAAGTCCCACGCGCTGCA GCTGAACAACCGCCAGATTCGCGGCCTGGAGGAGGAGCTGCAGTTTTCCTTGGGCAGCAAGATCAATGTGAAGGT GGGAGGAAACAGCAAAGGAACCCTGAAGGTCCTTCGTACCTACAATGTCCTGGACATGAAGAACACGACCTGCCA GGACCTACAGATAGAAGTGACAGTCAAAGGCCACGTCGAGTACACGATGGAAGCAAACGAGGACTATGAGGACTA TGAGTACGATGAGCTTCCAGCCAAGGATGACCCAGATGCCCCTCTGCAGCCCGTGACACCCCTGCAGCTGTTTGA GGGTCGGAGGACCGCCGCAGGAGGGGGCGCCCAAGGTGGTGGAGGAGCAGGAGTCCAGGGTGCACTACACCGT GTGCATCTGGCGGAACGCCAAGGTGGGGCTGTCTGGCATGGCCATCGCGGACGTCACCCTCCTGAGTGGATTCCA CGCCCTGCGTGCTGACCTGGAGAAGCTGACCTCCCTCTCTGACCGTTACGTGAGTCACTTTGAGACCGAGGGGCC CCACGTCCTGCTGTATTTTGACTCGGTCCCCACCTCCCGGGAGTGCGTGGGGCTTTGAGGCTGTGCAGGAAGTGCC GGTGGGGCTGGTGCAGCCGGCCAGCCCAACCCTGTACGACTACTACAACCCCGAGCGCAGATGTTCTGTGTTTTA CGGGGCACCAAGTAAGAGCAGACTCTTGGCCACCTTGTGTTCTGCTGAAGTCTGCCAGTGTGCTGAGGGGAAGTG CCCTCGCCAGCGTCGCGCCCTGGAGCGGGGTCTGCAGGACGAGGATGGCTACAGGATGAAGTTTGCCTGCTACTA CCCCCGTGTGGAGTACGCCTTCCAGGTTAAGGTTCTCCGAGAAGACAGCAGAGCTGCTTTCCGCCTCTTTGAGAC CAAGATCACCCAAGTCCTGCACTTCACCAAGGATGTCAAGGCCGCTGCTAATCAGATGCGCAACTTCCTGGTTCG AGCCTCCTGCCGCCTTCGCTTGGAACCTGGGAAAGAATATTTGATCATGGGTCTGGATGGGCCCACCTATGACCT CGAGGGACACCCCCAGTACCTGCTGGACTCGAATAGCTGGATCGAGGAGATGCCCTCTGAACGCCTGTGCCGGAG CACCCGCCAGCGGCCAGCCTGTGCCCAGCTCAACGACTTCCTCCAGGAGTATGGCACTCAGGGGTGCCAGGTGTG AGGGCTGCCCTCCCACCTCCGCTGGGAGGAACCTGAACCTGGGAACCATGAAGCTGGAAGCACTGCTGTCCCGC TTTCATGAACACAGCCTGGGACCAGGGCATATTAAAGGCTTTTGGCAGCA

2338/6881 FIGURE 2148

ATTCTTGTCTGTTCTGCCTCACTCCCGAGCTCTACTGACTCCCAACAGAGCGCCCCAAGAAGAAAATCGCCATAAG TGGAGTCCCTGTGCTAGGATTTTTCATCATAGCTGTGCTGATGAGCGCTCAGGAATCATGGGCTATCAAAGAAGA ACATGTGATCATCCAGGCCGAGTTCTATCTGAATCCTGACCAATCAGGCGAGTTTATGTTTGACTTTGATGGTGA TGAGATTTTCCATGTGGATATGGCAAAGAAGGAGACGGTCTGGCGGCTTGAAGAATTTGGACGATTTGCCAGCTT TGAGGCTCAAGGTGCATTGGCCAACATAGCTGTGGACAAAGCCAACCTGGAAATCATGACAAAGCGCTCCAACTA TACTCCGATCACCAATGTACCTCCAGAGGTAACTGTGCTCACGAACAGCCCTGTGGAACTGAGAGAGCCCAACGT CCTCATCTGTTTCATAGACAAGTTCACCCCACCAGTGGTCAATGTCACGTGGCTTCGAAATGGAAAACCTGTCAC CACAGGAGTGTCAGAGACAGTCTTCCTGCCCAGGGAAGACCACCTTTTCCGCAAGTTCCACTATCTCCCCTTCCT GCCCTCAACTGAGGACGTTTACGACTGCAGGGTGGAGCACTGGGGCTTGGATGAGCCTCTTCTCAAGCACTGGGA GTTTGATGCTCCAAGCCCTCTCCCAGAGACTACAGAGAACGTGGTGTGTGCCCTGGGCCTGACTGTGGGTCTGGT GGGCATCATTATTGGGACCATCTTCATCATCAAGGGATTGCGCAAAAGCAATGCAGCAGAACGCAGGGGGCCTCT GTAAGGCACATGGAGGTGATGGTGTTTCTTAGAGAGAAGATCACTGAAGAAACTTCTGCTTTAATGGCTTTACAA AGCTGGCAATATTACAATCCTTGACCTCAGTGAAAGCAGTCATCTTCAGCATTTTCCAGCCCTATAGCCACCCCA AGAGTGGTTATGCCTCCTCGATTGCTCCATACTCTAACATCTAGCTGGCTTCCCTGTCTATTGCCTTTTCCTGTA ${\tt TCTATTTCCTCTATTCCTATCATTTTATCACCATGCAATGCCTCTGGAATAAAACATACAGGAGTCTGTC}$ TCTGCTATGGAATGCCCCATGGGGCATCTCTTGTGTACTTATTGTTTAAGGTTTCCTCAAACTGTGATTTTTCTG AACACAATAAACTATTTTGAAGATCTTGGGTGGAA

2339/6881 FIGURE 2149

MAISGVPVLGFFIIAVLMSAQESWAIKEEHVIIQAEFYLNPDQSGEFMFDFDGDEIFHVDMAKKETVWRLEEFGR FASFEAQGALANIAVDKANLEIMTKRSNYTPITNVPPEVTVLTNSPVELREPNVLICFIDKFTPPVVNVTWLRNG KPVTTGVSETVFLPREDHLFRKFHYLPFLPSTEDVYDCRVEHWGLDEPLLKHWEFDAPSPLPETTENVVCALGLT VGLVGIIIGTIFIIKGLRKSNAAERRGPL

2341/6881 FIGURE 2151

MEGTQEYDSSMQTVRFQGERRKSPSNATFSPFFWMPHSAKSLVADAGIHSRNQHSYAIASFIKYSQLHFKSRESR AGARDQPIIWKLKANYSAEERFLLLGFSDWPSLQPVLFALVLLCYLLTLTGNSALVLLAVRDPRLHTPMYYFLCH LALVDAGFTTSVVPPLLANLRGPALWLPRSHCTAQLCASLALGSAECVLLAVMALDRAAAVCRPLRYAGLVSPRL CRTLASASWLSGLTNSVAQTALLAERPLCAPRLLDHFICELPALLKLACGGDGDTTENQMFAARVVILLLPFAVI LASYGAVARAVCCMRFSGGRRRAVGTCGSHLTAVCLFYGSAIYTYLQPAQRYNQARGKFVSLFYTVVTPALNPLI YTLRNKKVKGAARRLLRSLGRGQAGQ

2343/6881 FIGURE 2153

 ${\tt MAEEKPKEGVKTENNDHINLKVAGQDGSVVQFKIKRHTPLSKLMKAYCERQGLSMRQIRFRFDGQPMKQTHLHSWKWRMKIQLMCSNSRREVSTEKGTCFFTPELCSLKTKITFSIRKLQFASTTS}$

GCGCACCCTCTCCCCTTGTCCACTGCTGCCGCCTCCTTCTTCTGCCGCTCCTGGTGCTGCTTGTGTGCTCGTTTG
GAGCGGACCTGGTACCTCTTTTGTGAAGCGGCAGCTGAGGAGACCTCCGGCGCTCGCCATGGCCGAAGAAAAGCCC
AAGGAAGGAGTCAAGACTGAGAACAACGATCATATTAATTTGAAGGTGGCGGGGCAGGATGGTTCTTGTGGTGCAG
TTTAAGATTAAGAGGCATACACCACTTAGTAAACTAATGAAAGCCTATTGTGAACGACAGTGGAAATGGAGGATG
AAGATACAATTGATGTGTTCCAACAGCAGACGGGAGGTGTCTACTGAAAAGGGAACCTGCTTCTTTACTCCAGAA
CTCTGTTCTTTAAAGACCAAGATTACATTCTCAATTAGAAAACTGCAATTTGCTTCCACCACATCCTGACTACTA
CCGTATAGTTTTCTCTATTCTTTCATTTCCCCCTTCCCCATTCCTTTACTGTACATA

GGCGCCGTGGATAGAGCAGGAGGGGCCGGAGTATTGGGACCGGAACACACAGATCTACAAGGCCCAGGCACAGAC TGACCGAGAGACCTGCGGAACCTGCGCGGCTACTACAACCAGAGCGAGGCCGGGTCTCACACCCTCCAGAGCAT GTACGGCTGCGACGTGGGGCCGGCGCGCCTCCTCCGCGGGCATGACCAGTACGCCTACGACGGCAAGGATTA CATCGCCCTGAACGAGGACCTGCGCTCCTGGACCGCCGCGGACACGGCGGCTCAGATCACCCAGCGCAAGTGGGA GGCGGCCCGTGAGGCGGAGCCGAGAGCCTACCTGGAGGGCGAGTGCGTGGAGTGGCTCCGCAGATACCTGGA GGCCACCCTGAGGTGCTGGGCCCTGGGTTTCTACCCTGCGGAGATCACACTGACCTGGCAGCGGGATGGCGAGGA ${\tt CCAAACTCAGGACACTGAGCTTGTGGAGACCAGACCAGGAGATAGAACCTTCCAGAAGTGGGCAGCTGTGGT}$ GGTGCCTTCTGGAGAAGAGAGAGATACACATGCCATGTACAGCATGAGGGGCTGCCGAAGCCCCTCACCCTGAG ATGGGAGCCGTCTCCCAGTCCACCGTCCCCATCGTGGGCATTGTTGCTGGCCTGGCTGTCCTAGCAGTTGTGGT CATCGGAGCTGTGGTGGTGTGTGTGTGTGGGGGAGGAGGTTCAGGTGGAAAAGGAGGGGGGCTACTCTCAGGC ${\tt TGCGTGCAGCGACAGTGCCCAGGGCTCTGATGTGTCTCTCACAGCT} \underline{{\tt TGA}}{\tt AAAGCCTGAGACAGCTGTCTTGTGAG}$ $\overline{\mathsf{GGACTGAGATGCAGGATTTCTTCACGCCTCCCCTTTGTGACTTCAAGAGCCTCTGGCATCTCTTTCTGCAAAGGC}$ ACCTGAATGTGTCTGCGTCCCTGTTAGCATAATGTGAGGAGGTGGAGAGACAGCCCACCCTTGTGTCCACTGTGA CCCCTGTTCGCATGCTGACCTGTGTTTCCTCCCCA .

MLVMAPRTVLLLLSAALALTETWAGSHSMRYFYTSVSRPGRGEPRFISVGYVDDTQFVRFDSDAASPREEPRAPW IEQEGPEYWDRNTQIYKAQAQTDRESLRNLRGYYNQSEAGSHTLQSMYGCDVGPDGRLLRGHDQYAYDGKDYIAL NEDLRSWTAADTAAQITQRKWEAAREAEQRRAYLEGECVEWLRRYLENGKDKLERADPPKTHVTHHPISDHEATL RCWALGFYPAEITLTWQRDGEDQTQDTELVETRPAGDRTFQKWAAVVVPSGEEQRYTCHVQHEGLPKPLTLRWEP SSQSTVPIVGIVAGLAVLAVVVIGAVVAAVMCRRKSSGGKGGSYSQAACSDSAQGSDVSLTA

GGCGCCCGAACCGTCCTCCTGCTCTCTCGGCGCCCTGGCCCTGACCGAGACCTGGGCCGCCCCAGGCTCCCA GCAGGAGGGGCCGGAGTATTGGGACCGGAACACACAGATCTTCAAGACCAACACACAGACTGACCGAGAGAGCCT GCGGAACCTGCGCGGCTACTACAACCAGAGCGAGGCCGGGTCTCACACCCTCCAGAGCATGTACGGCTGCGACGT GGGGCCGGACGGGCCCTCCTCCGCGGGCATAACCAGTACGCCTACGACGGCAAGGATTACATCGCCCTGAACGA GGACCTGCGCTCCTGGACCGCGGCGGACACCGCGGCTCAGATCACCCAGCGCAAGTGGGAGGCGGCCCGTGTGGC GGAGCAGGACAGAGCCTACCTGGAGGGCACGTGCGTGGAGTGGCTCCGCAGATACCTGGAGAACGGGAAGGACAC GCTGGAGCGCGGGACCCCCAAAGACACGTGACCCACCCCCATCTCTGACCATGAGGCCACCCTGAGGTG CTGGGCCCTGGGCTTCTACCCTGCGGAGATCACACTGACCTGGCAGCGGGATGGCGAGGACCAAACTCAGGACAC TGAGCTTGTGGAGACCAGCAGCAGGAGATAGAACCTTCCAGAAGTGGGCAGCTGTGGTGGCCTTCTGGAGA AGAGCAGAGATACACATGCCATGTACAGCATGAGGGGCTGCCGAAGCCCCTCACCCTGAGATGGGAGCCGTCTTC CCAGTCCACCGTCCCCATCGTGGGCATTGTTGCTGGCCTGGCTGTCCTAGCAGTTGTGGTCATCGGAGCTGTGGT TGCCCAGGGCTCTGATGTGTCTCTCACAGCTTGAAAAGCCTGAGACAGCTGTCTTGTGAGGGACTGAGATGCAGG ATTTCTTCACGCCTCCCCTTTGTGACTTCAAGAGCCTCTGGCATCTCTTTCTGCAAAGGCACCTGAATGTGTCTG CGTCCCTGTTAGCATAATGTGAGGAGGTGGAGAGACAGCCCACCCTTGTGTCCACTGTGACCCCTGTTCCCATGC TGACCTGTGTTTCCTCCCCAGTCATCTTTCTTGTTCCAGAGAGGTGGGGCTGGATGTCTCCATCTCTCTAAC TTTACGTGCACTGAGCTGCAACTTCTTACTTCCCTACTGAAAATAAGAATCTGAATATAAATTTGTTTTCTCAAA TATTTGCTATGAGAGGTTGATGGATTAATTAAATAAGTCAATTCCTGGAATTTGAGAGAGCAAATAAAGACCTGA GA:

2348/6881 FIGURE 2158

MLVMAPRTVLLLLSAALALTETWAGSHSMRYFDTAMSRPGRGEPRFISVGYVDDTQFVRFDSDAASPREEPRAPW IEQEGPEYWDRNTQIFKTNTQTDRËSLRNLRGYYNQSEAGSHTLQSMYGCDVGPDGRLLRGHNQYAYDGKDYIAL NEDLRSWTAADTAAQITQRKWEAARVAEQDRAYLEGTCVEWLRRYLENGKDTLERADPPKTHVTHHPISDHEATL RCWALGFYPAEITLTWQRDGEDQTQDTELVETRPAGDRTFQKWAAVVVPSGEEQRYTCHVQHEGLPKPLTLRWEP SSQSTVPIVGIVAGLAVLAVVVIGAVVAAVMCRRKSSGGKGGSYSQAACSDSAQGSDVSLTA

 ${\tt TCCCGCCGACACGCCGAGAACGTCGCTTTCGTCGTTACTTGTCTGCAGGACGGCTGGTCCGGGCCCAGGCCCTC}$ $\tt CTCCAGCGACACCCAGGCCTCGATGTAGATGCTGGGCAGCCCCCACCACTGCACCGGGCCTGTGCCCGCCACGAT$ GCCCCTGCCCTGTGCCTGCTTCGGCTCGGGGCTGACCCTGCCCACCAGGACCGCCATGGGGACACGGCACTG ${\tt CATGCTGCCGCCAGGGCCCAGATGCCTACACCGATTTCTTCCTCCCGCTGCTAAGCCGCTGTCCCTCCGCC}$ ATGGGAATAAAGAATAAGGATGGGGAGACCCCTGGCCAAATTTTGGGCTGGGGACCCCCCTGGGATTCTGCTGAA GAGGAGGAAGAAGATGATGCCTCCAAGGAGCGGGAATGGAGACAGAAGCTCCAGGGTGAGCTGGAGGACGAGTGG CAGGAAGTCATGGGGAGGTTTGAAGGTGATGCCTCCCATGAAACCCAGGAACCTGAGTCCTTCTCAGCCTGGTCA GATCGCCTGGCCCGGGAACATGCCCAGAAGTGCCAGCAGCAGCAGCAGAAGCAGAGGGATCCCGTCGACCCCCA CGTGCTGAGGGCTCCAGCCAGAGCTGGCGACAGCAGGAGGAGGAGCAGCCGGGCCCCGGGCC AAGGAGGAAGAGCTGCGTGAGAGCCGAGCCAGGAGGCGCAGGAGGCTCTAGGGGACCGAGAACCCAAGCCAACC CCCTGCCCTGGGGGGGGGGCCCAGAGGCCATGGCTGCAGCCCTGGTGGCCAGGGGCCCCCCTTTGGAGGAACAG GGGGCTCTGAGGAGGTACTTGAGGGTCCAGCAGGTCCGCTGGCACCCTGACCGCTTCCTGCAGCGATTCCGAAGC CAGATTGAGACCTGGGAGCTGGGCCGTGTGATGGGAGCAGTGACAGCCCTTTCTCAGGCCCTGAATCGCCATGCA ${\tt AACAAGTGGGGGGGGGGGGGGCCGCCACCACTGCTCCTTGACTCTGCCGTTTCCTAATAAGACCTGGTTCC}$ ACATCTC

 $\label{thm:maylopp} $$ MAYLGPYPTSRQPPQMRLLPHNSLHRHSSIVTMASLDPAPASQPSLQALNFLKLTSPGPAHASLQPLQAQLLHLG GPSRPSLCLPSASTVPTSASQQILHAQLLPHLDPPDPDGVSLWHPQVKLLPFGSLSRPSSSCLPVASFGPAQLMP PGGLPKPRF .$

PCT/US2003/028547

2353/6881 FIGURE 2163

GGCACGAGGGCCGGAAGGCGGCGCCCGACGCAGCTGTTCACGCTTAGGTGGGCGACGTGGGCGCAGGTGGGCG CAGGATGGCAAAACAGAAGAGAAAAGTTCCTGAAGTGACAGAGAAAAAGAACAAAAAGCTGAAGAAGGCGTCAGC AGAGGGGCCACTGCTGGGCCCTGAGGCTGCACCAAGTGGCGAAGGAGCCGGCTCCAAGGGCGAAGCTGTGCTCAG GCCCGGGCTGGACGCAGAGCCAGAGCTGTCCCCAGAGGAGCAGAGGGTCCTGGAAAGGAAGCTGAAAAAGGAACG CAAGAAGAGGAGGCAGCCTCTGCGGGAGGCAGGCCTTGTGGCCCAGCACCCGCCTGCCAGGCGCTCGGGGGGC CGAACTGGCCCTGGACTACCTCTGCAGATGGGCCCAAAAGCACAAGAACTGGAGGTTTCAGAAGACGAGGCAGAC GTGGCTCCTGCTGCACATGTATGACAGTGACAAGGTTCCCGATGAGCACTTCTCCACCCTGCTGGCCTACCTGGA GGGGCTGCAGGGCCGGGCCCGAGAGCTGACGGTGCAGAAGGCGGAAGCCCTGATGCGGGAGCTGGATGAGGAGGG CGGGGCGGGGCCGCTGCCCAGTGCAGGGCTGCCTCAGACCACAGGGTGCAGCTCCTCCGGCGGTGGGGGCCGG GTTCACCAGCAGGGCAGCGGCTGAGCAAGGGCTTTCAGCTCCTCCGGTGGTGGGGGCCGGGATCACCAGCACCAG AGCCTCGCAAGGGCCCCTTCCCTCCAGACCCTCCTTGGCCGGTGACGGCTGTGACAGTGATGGCAGGTTCAG TGCCTTCAGCGCAGAGCGTGGATGCTCTGGAATCACCCGGACCCCTGGCCTTGGAGGGACCCTCCAGCCCCAGGA ATCTGCTTTGGAGGGAAATGTCTATTTTTCTACCGGGAATATTTTAGAGATTGGGGCATGCTGGCTCCTCCCGCC CATCGAGGGGCCTGGCTGTGTTTTCCTTTGACCCCACACAGCGTCATTGCGGGTCATGGGGAGCCCCTGG TGGGAGCTTGTGGAGTCGGATCACGTACCTGTGCAGAAACCGCCTCTGTGGCTGCATTTGAAATAAAACCCGACC CAGCAGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

MAKQKRKVPEVTEKKNKKLKKASAEGPLLGPEAAPSGEGAGSKGEAVLRPGLDAEPELSPEEQRVLERKLKKERK KEERQRLREAGLVAQHPPARRSGAELALDYLCRWAQKHKNWRFQKTRQTWLLLHMYDSDKVPDEHFSTLLAYLEG LQGRARELTVQKAEALMRELDEEGSDPPLPGRAQRIRQVLQLLS

GGTTCCACACTGTTGGGAGTCGCTGCAAGAATCGGACAGGCGCTGAGCACCTGTGGCTGACCCGACATCTCAGGG ACCCATTTGTGAAGGCTGCGAAGGTGGAGAGTTACCGGTGTCGAAGCGCCTTCAAGCTCCTGGAGGTGAACGAGA GGCACCAGATTCTGCGGCCCGGCCTTCGGGTGTTAGACTGTGGGGCAGCTCCTGGGGGCCTGGAGTCAGGTGGCGG TGCAGAAGGTCAACGCCGCAGGCACAGATCCCAGCTCTCCTGTTGGCTTCGTGCTTGGGGTAGATCTTCTTCACA AGGTGCTTCCTGGCAGGAGAGCAGATGTGATTCTGAGCGACATGGCGCCCAATGCCACAGGGTTCCGGGACCTCG ATCATGACAGGCTCATCAGCCTGTGCCTGACCCTTCTCAGCGTGACCCCAGACATCCTGCAACCTGGGGGGACAT TCCTTTGTAAAACCTGGGCTGGAAGTCAAAGCCGTCGGTTACAGAGGAGACTGACAGAGGAATTCCAGAATGTAA GGATCATCAAACCTGAAGCCAGCAGGAAAGAGTCATCAGAAGTGTACTTCTTGGCCACACAGTACCACGGAAGGA $oldsymbol{\mathsf{A}\mathsf{G}\mathsf{G}\mathsf{G}\mathsf{C}\mathsf{A}\mathsf{C}\mathsf{T}\mathsf{G}\mathsf{A}\mathsf{G}\mathsf{G}\mathsf{A}\mathsf{T}\mathsf{T}\mathsf{T}\mathsf{C}\mathsf{T}\mathsf{T}\mathsf{G}\mathsf{T}\mathsf{C}\mathsf{A}\mathsf{T}\mathsf{A}\mathsf{A}\mathsf{T}\mathsf{G}\mathsf{G}\mathsf{T}\mathsf{C}\mathsf{A}\mathsf{T}\mathsf{T}\mathsf{A}\mathsf{G}\mathsf{C}\mathsf{T}\mathsf{C}\mathsf{T}\mathsf{T}\mathsf{T}\mathsf{A}\mathsf{A}\mathsf{G}\mathsf{C}\mathsf{T}\mathsf{A}\mathsf{G}\mathsf{A}\mathsf{A}\mathsf{A}\mathsf{C}\mathsf{G}\mathsf{T}$ AGCCTGAGCTCCTGAAGAGTTCCTGGGAGATTTGAGCTGATTTTGGAGATGGAGCAGGACAAGTGGGGAGTCTCT CTCTCTCTCTCTCTCTCTTTTTAACCAAAAAGAGATGACAAAACTAAGTTCAGGGGCCATGGAAAATGAAA AAGTCCGCTATATTGTGATTTGGGAAGAGAAAGTTATCAAGAGAAAGAGGTGAGGATGGAAGGATGGAAAAAAC AGACTGTGGGAAGGATCAGAAGGAATCCGCCGAGGCAGGGATGGGTGTGCCCATGTGTGCCTTGACGGGACTTCA TCTTATAGACTGTTAAACTGTCACACACAAACAGGCTTTCCACCCCTGCTCTGAGAGCACCACGCACAGATTTCC TTAGAAGGCTGAGGCTGGGGGATTGCTTGAAGTCAGGAGTTCAAGACCAACCTGGGCAACATAGCAACACCCCCC ATGTCTACAAAAATGAAAAACCAAAAAGCAAACCAAAAGAAAAATCTGAAATTTCCATCTGGGGATTAACTTCTG TCTTTCTGGTGAACAATATAGCAATTCACGCATTCTTCAAGCAGCAAAAGTTCCCGGAACAATTAGGGAAGACGT ATGGTCTGAATTTATCCAGGCAGTGGGTCTGCTTTGGTTTTTGCTGGAAATTTATATCAGTGTCTGGGCTCCCAA GAACATAAATGTAATTGCCAAAGCAAAAAA

MAGYLKLVCVSFQRQGFHTVGSRCKNRTGAEHLWLTRHLRDPFVKAAKVESYRCRSAFKLLEVNERHQILRPGLR VLDCGAAPGAWSQVAVQKVNAAGTDPSSPVGFVLGVDLLHIFPLEGATFLCPADVTDPRTSQRILEVLPGRRADV ILSDMAPNATGFRDLDHDRLISLCLTLLSVTPDILQPGGTFLCKTWAGSQSRRLQRRLTEEFQNVRIIKPEASRK ESSEVYFLATQYHGRKGTVKQ

FIGURE 2167

GGAGTCCGAGGTGAGGACCGAGCCGGCCGAGGCAGAGGCGGCCTCCGGCCCGTCCGAGTCGCCCTCGCCCCC GGCCGCCGAGGAGCTGCCCGGGTCGCATGCTGAGCCCCCTGTCCCGGCACAGGGCGAGGCCCCAGGAGAGCAGGC TCGGGACGACGCTCCGACAGCCGGGCCCAGGCGGTGTCCGAGGACGCGGGAGGAAACGAGGCAGAGCGGCCGA GGCCGAACCCCGGGCGCTGGAGAACGGCGACGCGGACGAGCCCTCCTTCAGCGACCCCGAGGACTTCGTGGACGA CGTGAGCGAGGAAGAATTACTGGGAGATGTACTCAAAGATCGGCCCCAGGAAGCAGATGGAATCGATTCGGTGAT TGTAGTGGACAATGTCCCTCAGGTGGGACCCGACCTGAGAAACTCAAAAATGTCATCCACAAGATCTTTTC CAAGTTTGGGAAAATCACAAATGATTTTTATCCTGAAGAGGGTGGGAAGACAAAAGGGTATATTTTCCTGGAGTA GGTCAACCTCTTTACGGATTTTGACAAGTATATGACGATCAGTGACGAGTGGGATATTCCAGAGAAACAGCCTTT CAAAGACCTGGGGAACTTACGTTACTGGCTTGAAGAGGCAGAATGCAGAGATCAGTACAGTGTGATTTTTGAGAG GACGTATGTGCGTTGGTCTCCTAAGGGCACCTACCTGGCTACCTTTCATCAAAGAGGCATTGCTCTATGGGGGGG AGAGAAATTCAAGCAAATTCAGAGATTCAGCCACCAAGGGGTTCAGCTTATTGACTTCTCACCTTGTGAAAGGTA CCTGGTGACCTTTAGCCCCCTGATGGACACGCAGGATGACCCTCAGGCCATAATCATCTGGGACATCCTTACGGG GCACAAGAAGAGGGGTTTTCACTGTGAGAGCTCAGCCCATTGGCCTATTTTTAAGTGGAGCCATGATGGCAAATT CTTTGCCAGAATGACCCTGGATACGCTTAGCATCTATGAAACTCCTTCTATGGGTCTTTTGGACAAGAAGAGTTT GAAGATCTCTGGGATAAAAGACTTTTCTTGGTCTCCTGGTGGTAACATAATCGCCTTCTGGGTGCCTGAAGACAA AGATATTCCAGCCAGGGTAACCCTGATGCAGCTCCCTACCAGGCAAGAGATCCGAGTGAGGAACCTGTTCAATGT CCAGGGTGTTGTCACAAATTTTGAAATTTTCCGAATGAGGGAGAAACAGGTACCTGTGGATGTGGTCGAGATGAA ATCTGTGTCTTCTACCACGTCAAAAACAACGGGAAGATTGAACTCATCAAGATGTTCGACAAGCAGCAGGCGAA CACCATCTTCTGGAGCCCCCAAGGACAGTTCGTGGTGTTTGGCGGGCCTGAGGAGTATGAACGGTGCCTTAGCGTT TGTGGACACTTCGGACTGCACGGTCATGAACATCGCAGAGCACTACATGGCTTCCGACGTCGAATGGGATCCTAC TGGGCGCTACGTCGTCACCTCTGTGTCCTGGTGGAGCCATAAGGTGGACAACGCGTACTGGCTGTGGACTTTCCA GGGACGCCTCCTGCAGAAGAACAACAAGGACCGCTTCTGCCAGCTGCTGTGGCGGCCCCGGCCTCCCACACTCCT GAGCCAGGAACAGATCAAGCAAATTAAAAAGGATCTGAAGAATACTCTAAGATCTTTGAACAGAAGGATCGTTT GAGTCAGTCCAAAGCCTCAAAGGAATTGGTGGAGAGAAGGCGCACCATGATGGAAGATTTCCGGAAGTACCGGAA AATGGCCCAGGAGCTCTATATGGAGCAGAAAAACGAGCGCCTGGAGTTGCGAGGAGGGGGTGGACACTGACGAGCT GGACAGCAACGTGGACGACTGGGAAGAGGAGACCATTGAGTTCTTCGTCACTGAAGAAATCATTCCCCTCGGGAA TCAGGAGTGACCTGGAGCACTGTGCGCAGCCGTGTGTGCTGTGGAGCCGAGGCCGTCCTGCAGGAAGCCGCGTGA CTCCCGCCTCCTCCTGTGCTCTCTGGCTCTGGACTGTGACTGCGCCTGGATTCTGCCATTGCGACACATTTTTG TGTTGGAACCGCCGGCGTTGGCTCCGAAGACTTAGCGACGCCACTGGCGGCACCTTCTCCTGCGCCCAGTGATGT TTCCACGGTGCCTGTACACAGCCGAGCAGCATTTCCGTTGAAGGACTTGCATCCCCATTGCGGGCAGTGCTGGAC GTGTCCCGGAGACCCACCGGGAGGGCGCCGCCATGCCTTGTACCCCCACCGTGCAGGTTGTGGCCGGTTTTCTCC GCAGGTTGAACATGGAAATAAAAGCAAACTTGTATG

PCT/US2003/028547

2358/6881 FIGURE 2168

GTCGGAGCGACCGGCTTGGCGCCTGCCCTGCCCCAGCCCCTCTCAGCTTGAACTCCTTCCAAGTCTGGGCCC CGGGCCTGGCAGGTGGCACTGTCCGGAGGCGGAGGCCTTGGGCGAGGGTGGTTGCGGCGGAGGACGCAACCGAGC GGGCCTGCGGCCTCACCATGGACCCAGAATGCGCCCAGCTGCTCCCGGCTCTCTGTGCTGTTCTGGTAGATCCCA GGCAGCCGGTGGCAGATGACACCTGTTTGGAGAAGCTCCTGGACTGGTTTAAAACGGTCACTGAAGGAGAGTCCA GTGTCGTGCTGCAGGAGCACCCCTGCCTGGTGGAGCTGCTGTCCCATG CTGGGGTCCTCTCTCTCACTGCGCCTGGCAGGAACCTTCGCAGCCCAGGAAAACTGCTTCCAGTATCTTCAGG TGCGGTCGACACCATCTTCTCCCTGCAGGGAGACTCCAGCCTGTTTGTGGCCTCGGCGGCCAGTCAGCTCCTGGT TGCCCAGAAGATCATGGATCACGTTGAAGAGTCCTTGTGCTCCGCGGCCACCCCCAAGGTCACTCAGGCCCTGAA CGTCCTGACCACGACCTTCGGGCGCTGCCAGAGCCCCTGGACGGAAGCCCTGTGGGTGCGGCTGAGTCCCCGCGT CATGGGACCCCTGGCTTTGGGGATCCTGAAGCTCGAGCACTGTCCACAGGCACTGAGGACCCAGGCCTTCCAGGT CCTTCTCCAGCCCTGGCCTGTGTCCTGAAGGCCACGGTTCAGGCCCCCGGACCCCCAGGCTTGCTGGACGGGAC GGCAGACGATGCCACGGTGGACACACTCCTGGCCTCCAAGTCGTCCTGCGCCGGCCTCCTGTGCCGCACCCT GGCTCACCTGGAGGAGCTGCAGCCGCTGCCCCAGCGCCCTTCACCGTGGCCCCAGGCGTCTCTACTGGGGGCTAC GGCGGGCTGCGTCCGGGTCCAGCGAGCAGCCCTCGACTTCCTGGGGACGCTGTCACAGGGGACAGGCCCCCAGGA GCTGGTGACGCAGGCGCTTGCTGTCCTCCTGGAGTGCCTCGAGAGCCCCGGCTCCAGCCCCACGGTTCTGAAGAA GGCCTTCCAGGCCACGCTCAGGTGGCTCCTGAGCTCACCCAAGACCCCCGGCTGCTCTGATCTCGGCCCCCTCAT CCCGCAGTTCCTCAGAGAGCTGTTCCCTGTGCTGCAGAAACGCCTGTGCCACCCTGCTGGGAGGTGAGGGACTC $\tt CGCCCTCGAGTTCCTGACCCAGCTGAGCAGGCACTGGGGAGGACAGGCTGACTTCAGATGCGCACTCTTGGCTTC$ GGGGCAGCTGTCCAGCCAGGGCCTGCACGCCCCACCAGCCCTGAGCATGCAGAGGCCCGGCAGAGCCTGTTCCT GCTGCGGGACGCCACGCCGACGCCCAGGACACGGAGCAGTTCGTGGCCACTGTGCTGCAGGCGAGGCCGAGCCG AGACCTGGACTGGGAGTCCGCGCCCAGGGCCTGGAGCTGGCCCTCGTGTTCCTGGGCCAGACTTTGGGGCCGCC GCGTACCCACTGCCCTATGCCGTGGCCCTACCCGAGGTGGCCCAGCCCAGCCACTCACCGAGGCACTGAGGGC TCTCTGCCACGTGGGGCTCTTTGACTTCGCCTTTTGTGCCTTGTTTGACTGCGACCGCCCTGTGGCGCAGAAGTC TTGTGACCTCCTTCTCTCCTGAGGGACAAGATTGCTTCCTACAGCAGCCTGCGGGAGGCCAGGGGCAGCCCCAA TGAGGCTGTGCTGGCCATGCTCAGGTCCCTAGACCTGGAGGGCCTGCGGAGCACGCTGGCCGAGAGCAGCGACCA CGTGGAAAAGAGTCCCCAGTCCCTGCAGGACATGCTGGCCACGGGAGGCTTCCTGCAGGGGGACGAGGCCGA CTGCTACTGAGCAGAACCAGAGTCTGCCACTGGGGCTCAGGACCAAGGGAGCAGCACCATGTCCTTCTGTGGGA CACTGCCAGCCCCAGGCCCAGCCCAGCCCGGTGGATCCTCTGGGGAAGCCAGGACCAGGAGGAAGCAAGGTC

MRGGAEGQPCLPGGDWPACAQKIMDHVEESLCSAATPKVTQALNVLTTTTFGRCQSPWTEALWVRLSPRVACLLER DPIPAAHSFVDLLLCVARSPVFSSSDGSLWETVARALSCLGPTHMGPLALGILKLEHCPQALRTQAFQVLLQPLA CVLKATVQAPGPPGLLDGTADDATTVDTLLASKSSCAGLLCRTLAHLEELQPLPQRPSPWPQASLLGATVTVLRL CDGSAAPASSVGGHLCGTLAGCVRVQRAALDFLGTLSQGTGPQELVTQALAVLLECLESPGSSPTVLKKAFQATL RWLLSSPKTPGCSDLGPLIPQFLRELFPVLQKRLCHPCWEVRDSALEFLTQLSRHWGGQADFRCALLASEVPQLA LQLLQDPESYVRASAVTAMGQLSSQGLHAPTSPEHAEARQSLFLELHILSVDSEGFPRRAVMQVFTEWLRDGHA DAAQDTEQFVATVLQAASRDLDWEVRAQGLELALVFLGQTLGPPRTHCPYAVALPEVAPAQPLTEALRALCHVGL FDFAFCALFDCDRPVAQKSCDLLLFLRDKIASYSSLREARGSPNTASAEATLPRWRAGEQAQPPGDQEPEAVLAM LRSLDLEGLRSTLAESSDHVEKSPQSLLQDMLATGGFLQGDEADCY

WO 2004/030615 PCT/US2003/028547

FIGURE 2170A

GGCGGCCGAGCCGAGCCGAGCCGAGCCGGGCCGGGCCGGGCCCAGGAGCGCGCGATGAT GCGGGCGGCCAGGCGGGGTCGACGGGTCCCTGAAGCCCGCGCCCCGGGCCAGCAAGGGAGCCCCGCGCAGGCCG ${\tt CGCGCATCCGGAGGCCGGGGCCCCGCC} {\tt ATC} {\tt GCCGGGGTCAGCTACGCGGCGCCCTGGTGGGTGAGCCTCCTGC}$ ACCGGCTGCCCCACTTCGACCTGAGCTGGGAGGCCACTAGCAGCCAGTTCCGGCCCGAGGACACCGACTACCAGC AGGCCCTGCTGCTCCTGGGGGCCGCCCTGGCCTGCCCTCGACCTCCTCTTCCTGCTCTTCTACTCCT TCTGGCTGTGCTGCCGGCGCGCAAGAGCGAGGAGCACCTGGACGCCGACTGCTGCACGGCCTGGTGTGTCA TCATCGCCACGCTGGTGTGCAGCGCCGGCATCGCAGTGGGATTCTACGGCAACGGGGAGACCAGTGATGGCATCC ATAGGGCCACCTACTCGCTCCGCCACGCCAACCGCACGGTGGCCGGGGTCCAGGACCGCGTGTGGGACACGGCGG TGGGGCTGAACCACACGGCGGAGCCCAGCCTGCAGACCCTGGAGCGGCAGCTGGCCGGGCGGCCCGAGCCCCTGC GAGCCGTACAGAGGCTGCAGGGCCTGCTGGAGACGCTGCTGGGCTACACGGCCGCCATCCCCTTTTGGAGGAACA ACCCTGACGCCTACGTGACCAAAATGGTGGAGGAGTACTCGGTGCTGAGTGGGGACATCCTGCAGTACTACCTGG CCTGCTCGCCCCGCCCCCAACCCCTTCCAGCAGAAGCTGTCGGGCCACAAGGCACTGGTGGAGATGCAGG ${\tt ATGTCGTGGCTGAGGCTCCCTGGGAGCAGCCGGCCACTAAGGACCCCCTCCTCCGCGTCCAGG}$ AGGTGCTGAATGGCACGGAGGTGAACCTGCAGCACCTCACCGCCCTGGTGGACTGCCGCAGCCTGCATCTGGACT ACGTGCAAGCGCTGACCGGCTTCTGCTATGACGGCGTGGAGGGCCTCATCTACCTGGCCCTCTTCTCCTTCGTCA CAGCCCTCATGTTCAGCTCCATCGTCTGCAGCGTCCCGCACACCTGGCAGCAAAAGAGAGGCCCTGATGAGGACG GGGAGGAGGAGGCCGCTCCAGGGCCGCGGCAGGCGCACGACAGCCTCTACCGCGTCCACATGCCCAGCCTGTACA AGTACATGAGCCAGAACGCTAATTTCCAGAACCCCCGCTGTGAGAACACCCCACTCATTGGGCGCGAGTCCCCGC $\texttt{AC}\underline{\textbf{TAG}} \texttt{ACCGCGCCCGGCACCCCACGTGCCAACTTCCCCTCCCGTGCCAGCACTGCCGCTTCCACCT}$ GGGCCACCCACCGGACCCTCGCACGCCGTGCCAGGCCTGCCCAGACGCGTCTGCAGGCCGCTTGCCCTCCTGTC CCCTCCCGCAGGGGCACAGTGGAGACGCAGGGGCTCTGGGCCCGTACCGCCAACTCGGGTCACACCTGAACGCT GCTGCCAGCCGATGCCCCAGCCTGCACGCCACCTATCCCGGCACGCTCCCTCTGCAGATGGTCGCCGCACC TACAAGCCCTGGCCGCACCCAACCTGTGTTGTTGCCGCCCGGCCCTTCCCTCCACAGCTCTCCTCCCCGCCC GGCACTTCTGTGGACCCCTTCTTAGTTCACAGGCACGGCTGGGGCCCTCTGTGCTGGCGCCTGCTGGCCACTGA GGGACAGGGACACGTGCCACCTGCTCATCTCTGCCCTGAGGTCACCCCGTGGTCCCTCCACGTGCCCATCTCTCT GCAGTGCCCTCCTCGCCTGTGCAGCCCGCCCACCACAGGCTCACCCCTCCTGCCGGCTGCCAGAGGCCCCCTCC AGCAGGGCCTCTCCCGTTGCCCCAGCCTCACTCTCCCTCAGCACCTGCCCTGCTGGAGGCCCCAGCCCTCCG TGGACAGCAGGGGCCACGTGGAGCCCGGGCCGCTCACCCGCCACCCAGTGCTGGCCGCCTTCTTGGTGCCAAACC ACAGGTACAGCATCCCAGGAGCCCGGCCTGAGGGGCCTGGACCCGGGCTGTGAACATCCCTCAGCCCCTGCT GTCCCCCCTTGGGACTAACCACTAACCTCACCCCAAACTCCACGGGTGCCCCTAGCTGGCCCAGAGCCGGCAGT GTGAGCCCAAGTCCGGGCTGGAGCCGAGCCGGAGCAGCTGTCTGGGAGTCAAGGCTGCAGTAGCGTTTCTTCAT ATGAAGTGGGAGCGAGGCTCCCCAATGGTGCTTTTGGCTTTAGTGTACGATGTTTGCTGTGCTTCCCGCCGTGGA TCGAGGCTCGATGCCTGTGCCAAGGCCAGGGGCAGCCAGAGGGCAGCTGGATGGCCACGTGCAGGGGTCAAGGCT GGGCCCTGCAGTGGGCCGGCCGCCAGCCCCAGCAGTTTACAGACGCATGGCTCTTCCTCCCAGAGCAGCCGGCA GCTACCTGGACCGGAAATGTCCTCATCCCCTCCCTGGGGCCAGGCTCTGCCCTGGCCTTCCTCTGTGAACCCCTC TGGGGCCCCAAGCCGGGCGTCTGAGCTCCCCAGGCATGACCAAACCTCAGTGGAGGGGCCTCTGCTTCAGGCCC $\tt CCCGCCAGGGGAGTTCTCCAGGCCTAGGGCCAGGAGAGGGCCCTGGCACCCTGGCGTGGCTGCCCCCAAACGC$

WO 2004/030615 PCT/US2003/028547

2361/6881 FIGURE 2170B

MAGVSYAAPWWVSLLHRLPHFDLSWEATSSQFRPEDTDYQQALLLLGAAALACLALDLLFLLFYSFWLCCRRKS EEHLDADCCCTAWCVIIATLVCSAGIAVGFYGNGETSDGIHRATYSLRHANRTVAGVQDRVWDTAVGLNHTAEPS LQTLERQLAGRPEPLRAVQRLQGLLETLLGYTAAIPFWRNTAVSLEVLAEQVDLYDWYRVCLLGVLALVISWGAL GLELAVSVGSSDFCVDPDAYVTKMVEEYSVLSGDILQYYLACSPRAANPFQQKLSGSHKALVEMQDVVAELLRTV PWEQPATKDPLLRVQEVLNGTEVNLQHLTALVDCRSLHLDYVQALTGFCYDGVEGLIYLALFSFVTALMFSSIVC SVPHTWQQKRGPDEDGEEEAAPGPRQAHDSLYRVHMPSLYSCGSSYGSETSIPAAAHTVSNAPVTEYMSQNANFQ NPRCENTPLIGRESPPPSYTSSMRAKYLATSQPRPDSSGSH

FIGURE 2172

ACAGAACAGAGAGAAAGGAACCTTTGTCTTTCGTGTGAATGCTCGTGAGGGGCCATCCTTAGAGTGGAAAAGCTC CTGAGGCTCCAGCGAATCAAGACCCTCAGACCCCCGGGCTGTCCCCACCCCATGACCACATGTTCCGCAGGCACC GTGGAGATGTTCACGCATGTACTTCCCTTTGTGATTTCAGCCGATACGGAAGATGTGTGCATTGTAGAGAGATTG TTCTCCAGCAGCCTAGTGGCCATCGTGAGCCTTAAAGCACCAAGGAAGCTAAAGGTTTGCCACTTTAAGAAGGGA ${\tt ACTGAGATCTGCAACTACGCTACTCCAACACGATTCTGGCTGTGAAGGCTCAACAGGCTGATAGTATGC}$ $\verb|CTGGAGGAGTCCCTGTACATCCACAACATTCGGGACATGAAGGTGCTGCATACGATCAGGGAGACGCCTCCAAAC| \\$ CCTGCAGGCCTGTGTGCGCTGTCAATCAACAACGACAACTGCTACTTGGCGTACCCAGGGAGCGCGACCATCGGA GAGGTGCAGGTCTTCGATACCATTAATTTGAGAGCTGCAAACATGATTCCGGCTCACGACAGTCCTTTAGCGGCA $\tt CTGGCCTTTGACGCAAGTGGAACTAAACTTGCCACGGCTTCGGAGAAGGGGACCGTGATTAGGGTATTTTCCATT$ CCAGAAGGACAAAAACTCTTTGAGTTTCGGAGAGGAGTAAAGAGGTGCGTGAGCATCTGCTCCCTGGCCTTCAGC ${\tt ATGGACGCATGTTCCTCCCGCCTCCAGCAACACTGAGACCGTGCACATCTTCAAACTCGAGACTGTGAAAGAA}$ AAACCCCCAGAGGAGCCCACCACCTGGACCGGGTACTTCGGGAAAGTGCTCATGGCCTCCACCAGCTACCTGCCT TCCCAAGTGACAGAAATGTTCAACCAGGGCAGAGCTTTCGCCACGGTCCGCCTGCCATTCTGCGGCCACAAAAAC AACCTGGACCCCAGGAGGGCGGGGGTGTGCCCTGATGAAGCAGCACCGGCTGGACGGCAGTCTGAAAACGACC AATGAGATCTTGGACTCTCACGACTGCCCCTTAGTCACTCAGACATACGGCGCAGCTGCAGGAAAAGCC TACACAGACGACCTGGGTGCTGTGGGTGGCGCCTGCCTGGAGGACGAGGCCAGCGCCCTGCGCTGGATGAGGAC $\tt AGCGAGCACCCGCCCATGATTCTTCGGACTGAC\underline{TGA} ACTTGACCTGTGACCTCTGACCCGGGGAGCAGAGAACAC$ ${\tt TGGCTTCACAGAGGACTTTGTGCATTGCTGCTATGAACTTTGACCTGAGTCGGGGGAGAGGATGGCAGAGACTTT}$ ATT

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2364/6881 FIGURE 2173

MLLRLQRIKTLRPPGCPHPMTTCSAGTLSAVPCVSPRQVFVFERRFCLWHSHVEMFTHVLPFVISADTEDVCIVE RLFSSSLVAIVSLKAPRKLKVCHFKKGTEICNYSYSNTILAVKLNRQRLIVCLEESLYIHNIRDMKVLHTIRETP PNPAGLCALSINNDNCYLAYPGSATIGEVQVFDTINLRAANMIPAHDSPLAALAFDASGTKLATASEKGTVIRVF SIPEGQKLFEFRRGVKRCVSICSLAFSMDGMFLSASSNTETVHIFKLETVKEKPPEEPTTWTGYFGKVLMASTSY LPSQVTEMFNQGRAFATVRLPFCGHKNICSLATIQKIPRLLVGAADGYLYMYNLDPQEGGECALMKQHRLDGSLK TTNEILDSASHDCPLVTQTYGAAAGKAYTDDLGAVGGACLEDEASALRLDEDSEHPPMILRTD

j

GGATGATGATATCGCCGCGCTCGTCGACAACGGCTCCGGCATGTGCAAGGCCGGCTTCGCGGGCGACGATGC CCCCGGGCCGTCTTCCCCTCCATCGTGGGGCGCCCCAGGCACCAGGGCGTGATGGTGGGCATGGGTCAGAAGGA TTCCTATGTGGGCGACGAGGCCCAGAGCAAGAGAGCATCCTCACCCTGAAGTACCCCATCGAGCACGGCATCGT CACCAACTGGGACGACATGGAGAAAATCTGGCACCACACCTTCTACAATGAGCTGCGTGTGGCTCCCGAGGAGCA CCCCGTGCTGCTGACCGAGGCCCCCTGAACCCCAAGGCCAACCGCGAGAAGATGACCCAGATCATGTTTGAGAC CTTCAACACCCCAGCCATGTACGTTGCTATCCAGGCTGTGCTATCCCTGTACGCCTCTGGCCGTACCACTGGCAT CGTGATGGACTCCGGTGACGGGGTCACCCACACTGTGCCCATCTACGAGGGGTATGCCCTCCCCCATGCCATCCT GCGTCTGGACCTGGCCGGGACCTGACTGACTACCTCATGAAGATCCTCACCGAGCGCGGCTACAGCTTCAC CACCACGGCCGAGCGGGAAATCGTGCGTGACATTAAGGAGAAGCTGTGCTACGTCGCCCTGGACTTCGAGCAAGA GATGGCCACGGCTGCTTCCAGCTCCTCGGAGAAGAGCTACGAGCTGCCTGACGGCCAGGTCATCACCATTGG AACTACCTTCAACTCCATCATGAAGTGTGACGTGGACATCCGCAAAGACCTGTACGCCAACACACAGTGCTGTCTGG CGGCACCACCATGTACCCTGGCATTGCCGACAGGATGCAGAAGGAGATCACTGCCCTGGCACCAGCACAATGAA GATCAAGATCATTGCTCCTCGTGAGCGCAAGTACTCCGTGTGGATCGGCGGCTCCATCCTGGCCTCGCTGTCCAC CTTCCAGCAGATGTGGATCAGCAAGCAGGAGTATGACGAGTCCGGCCCCTCCATCGTCCACCGCAAATGCTTC<u>TA</u> **GGCGGACTATGACTTAGTTGCGTTACACCCTTTCTTGACAAAACCTAACTTGCGCAGAAAACAAGATGAGATTGG** GAACGGTGAAGGTGACAGCAGTCGGTTGGAGCGAGCATCCCCCAAAGTTCACAATGTGGCCGAGGACTTTGATTG CACATTGTTGTTTTTTTAATAGTCATTCCAAATATGAGATGCATTGTTACAGGAAGTCCCTTGCCATCCTAAAAG $\tt CCACCCCACTTCTCTTAAGGAGAATGGCCCAGTCCTCTCCCAAGTCCACACGGGGAGGTGATAGCATTGCTTT$ CGTGTAAATTATGTAATGCAAAATTTTTTTAATCTTCGCCTTAATACTTTTTTATTTTGTTTTATTTTGAATGAT GAGCCTTCGTGCCCCCCTTCCCCCTTTTTGTCCCCCAACTTGAGATGTATGAAGGCTTTTGGTCTCCCTGGGAG TGGGTGGAGCCAGGCCTTACCTGTACACTGACTTGAGACCAGTTGAATAAAAGTGCACACCTTA

MDDDIAALVVDNGSGMCKAGFAGDDAPRAVFPSIVGRPRHQGVMVGMGQKDSYVGDEAQSKRGILTLKYPIEHGI VTNWDDMEKIWHHTFYNELRVAPEEHPVLLTEAPLNPKANREKMTQIMFETFNTPAMYVAIQAVLSLYASGRTTG IVMDSGDGVTHTVPIYEGYALPHAILRLDLAGRDLTDYLMKILTERGYSFTTTAEREIVRDIKEKLCYVALDFEQ EMATAASSSSLEKSYELPDGQVITIGNERFRCPEALFQPSFLGMESCGIHETTFNSIMKCDVDIRKDLYANTVLS GGTTMYPGIADRMQKEITALAPSTMKIKIIAPPERKYSVWIGGSILASLSTFQQMWISKQEYDESGPSIVHRKCF WO 2004/030615 PCT/US2003/028547

2367/6881 FIGURE 2176

 $\tt CCGGGGCCGCGCGCGCCTCTCGTCTACTGCCACC{\color{red} ATG}{A}CCGCCAACGGCACAGCCGAGGCGGTGCAGATCCAG$ TTCGGCCTCATCAACTGCGGCAACAAGTACCTGACGGCCGAGGCGTTCGGGTTCAAGGTGAACGCGTCCGCCAGC AGCCTGAAGAAGAAGCAGATCTGGACGCTGGAGCAGCCCCCTGACGAGGCGGGCAGCGGGCCGTGTGCCTGCGC AGCCACCTGGGCCGCTACCTGGCGGCGGACAAGGACGGCAACGTGACCTGCGAGCGCGAGGTGCCCGGTCCCGAC TGCCGTTTCCTCATCGTGGCGCACGACGACGGTCGCTGGTCGCTGCAGTCCGAGGCGCACCGGCGCTACTTCGGC GGCACCGAGGACCGCCTGTCCTGCTTCGCGCAGACGGTGTCCCCCGCCGAGAAGTGGAGCGTGCACATCGCCATG GCCGTGGACCGCGACGTGCCCTGGGGCGTCGACTCGCTCATCACCCTCGCCTTCCAGGACCAGCGCTACAGCGTG CAGACCGCCGACCACCGCTTCCTGCGCCACGACGGCGCCCTGGTGGCGCCCCCGAGCCGGCCACTGGCTACACG ACGCTCAAGGCGGCAAGGCCACCAAGGTGGGCAAGGACGACCTCTTTGCTCTGGAGCAGAGCTGCGCCCAGGTC GTGCTGCAGGCGGCCAACGAGAGGAACGTGTCCACGCGCCAGGGTATGGACCTGTCTGCCAATCAGGACGAGGAG ACCGACCAGGAGACCTTCCAGCTGGAGATCGACCGCGACACCAAAAAGTGTGCCTTCCGTACCCACACGGGCAAG TACTGGACGCTGACGGCCACCGGGGGGCGTGCAGTCCACCGCCTCCAGCAAGAATGCCAGCTGCTACTTTGACATC GAGTGGCGTGACCGGCGCATCACACTGAGGGCGTCCAATGGCAAGTTTGTGACCTCCAAGAAGAATGGGCAGCTG GCCGCCTCGGTGGAGACAGCAGGGGACTCAGAGCTCTTCCTCATGAAGCTCATCAACCGCCCCATCATCGTGTTC CGCGGGGAGCATGGCTTCATCGGCTGCCGCAAGGTCACGGCCACCCTGGACGCCAACCGCTCCAGCTATGACGTC TTCCAGCTGGAGTTCAACGATGGCGCCTACAACATCAAAGACTCCACAGGCAAATACTGGACGGTGGGCAGTGAC TCCGCGGTCACCAGCGGCGACACTCCTGTGGACTTCTTCTTCGAGTTCTGCGACTATAACAAGGTGGCCATC AAGGTGGGCGGCGCTACCTGAAGGGCGACCACGCAGGCGTCCTGAAGGCCTCGGCGGAAACCGTGGACCCCGCC CTAACCCCTTCTCCGCCAGGTGGGCTCCAGGGCGGGAGGCAAGCCCCCTTGCCTTTCAAACTGGAAACCCCAGAG AAAACGGTGCCCCACCTGTCGCCCCTATGGACTCCCCACTCTCCCCTCCGCCCGGGTTCCCTACTCCCCTCGGG TCAGCGGCTGCGCCTGGGAGGGATTTCAGATGCCCCTGCCCTCTTGTCTGCCACGGGGCGAGTCTGGC ACCTCTTTCTTCTGACCTCAGACGGCTCTGAGCCTTATTTCTCTGGAAGCGGCTAAGGGACGGTTGGGGGCTGGG AGCCCTGGGCGTGTAGTGTAACTGGAATCTTTTGCCTCTCCCAGCCACCTCCTCCCAGCCCCCCAGGAGAGCTGG GCACATGTCCCAAGCCTGTCAGTGGCCCTCCTGGTGCACTGTCCCCGAAACCCCTGCTTGGGAAGGGAAGCTGT $\tt CGGGAGGGCTAGGACTGACCCTTGTGGTGTTTTTTTTGGGTGGTGGCTGGAAACAGCCCCTCTCCCACGTGGGAGA$ GGCTCAGCCTGGCTCCCTTCCCTGGAGCGGCAGGGCGTGACGGCCACAGGGTCTGCCCGCTGCACGTTCTGCCAA GGTGGTGGCGGGCGGGTAGGGGTGTGGGGGCCGTCTTCCTCCTGTCTCTTTCCTTTCACCCTAGCCTGACTG GAAGCAGAAAATGACCAAATCAGTATTTTTTTTAATGAAATATTATTGCTGGAGGCGTCCCAGGCAAGCCTGGCT GTAGTAGCGAGTGATCTGGCGGGGGGGCGTCTCAGCACCCTCCCCAGGGGGTGCATCTCAGCCCCCTCTTTCCGTC CTTCCCGTCCAGCCCCAGCCCTGGGCCTGGGCCGACACCTGGGCCAGAGCCCCTGCTGTGATTGGTGCTCCC TGGGCCTCCCGGGTGGATGAAGCCAGGCGTCGCCCCCTCCGGGAGCCCTGGGGTGAGCCGCCGGGGCCCCCCTGC TATAACTCTAAACGCCCATGATAGTAGCTTCAAACTGGAAATAGCGAAATAAAATAACTCAGTCTGC

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2368/6881 FIGURE 2177

MTANGTAEAVQIQFGLINCGNKYLTAEAFGFKVNASASSLKKKQIWTLEQPPDEAGSAAVCLRSHLGRYLAADKD GNVTCEREVPGPDCRFLIVAHDDGRWSLQSEAHRRYFGGTEDRLSCFAQTVSPAEKWSVHIAMHPQVNIYSVTRK RYAHLSARPADEIAVDRDVPWGVDSLITLAFQDQRYSVQTADHRFLRHDGRLVARPEPATGYTLEFRSGKVAFRD CEGRYLAPSGPSGTLKAGKATKVGKDELFALEQSCAQVVLQAANERNVSTRQGMDLSANQDEETDQETFQLEIDR DTKKCAFRTHTGKYWTLTATGGVQSTASSKNASCYFDIEWRDRRITLRASNGKFVTSKKNGQLAASVETAGDSEL FLMKLINRPIIVFRGEHGFIGCRKVTGTLDANRSSYDVFQLEFNDGAYNIKDSTGKYWTVGSDSAVTSSGDTPVD FFFEFCDYNKVAIKVGGRYLKGDHAGVLKASAETVDPASLWEY

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2369/6881 FIGURE 2178

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GCGCGCCTCTCCGTGTGGAGCTTCCCACCTGCATGTACCGGCTCCCCAACGTGCACGGCAGGAGCTACGGCCCAG $\tt CGCCGGGCGCTGGCCACGTGCAGGAGAGTCTAACCTGTCTCTGCAAGCTCTTGAGTCCCGCCAAGATGATATTT$ TAAAACGTCTGTATGAGTTGAAAGCTGCAGTTGATGGCCTCTCCAAGATGATTCAAACACCAGATGCAGACTTGG ATGTAACCAACATAATCCAAGCGGATGAGCCCACGACTTTAACCACCAATGCGCTGGACTTGAATTCAGTGCTTG TGCACAGGCTGCTCTGTGAGCACTTCAGGGTCCTGTCCACGGTGCACACGCACTCCTCGGTCAAGAGCGTGCCTG AAAACCTTCTCAAGTGCTTTGGAGAACAGAATAAAAAACAGCCCCGCCAAGACTATCAGCTGGGATTCACTTTAA TTTGGAAGAATGTGCCGAAGACGCAGATGAAATTCAGCATCCAGACGATGTGCCCCATCGAAGGCGAAGGGAACA ATATTGCGATTTTCAGTTAAAAGAGGGAAGCAGTAAAGAAAAAGCCGCTGTTTTCCGCTCCATGAACTCTGCTC TTGGGAAGAGCCCTTGGCTCGCTGGGAATGAACTCACCGTAGCAGACGTGGTGCTGTGGTCTGTACTCCAGCAGA TCGGAGGCTGCAGTGTGACAGTGCCAGCCAATGTGCAGAGGTGGATGAGGTCTTGTGAAAACCTGGCTCCTTTTA ACACGGCCCTCAAGCTCCTTAAGTGAATTGCCGTAACTGATTTTAAAGGGTTTAGATTTTAAGAATGGTGCTCTT AAAAGCGCATCATGTAATTTA

MPMYQVKPYHGGGAPLRVELPTCMYRLPNVHGRSYGPAPGAGHVQEESNLSLQALESRQDDILKRLYELKAAVDG LSKMIQTPDADLDVTNIIQADEPTTLTTNALDLNSVLGKDYGALKDIVINANPASPPLSLLVLHRLLCEHFRVLS TVHTHSSVKSVPENLLKCFGEQNKKQPRQDYQLGFTLIWKNVPKTQMKFSIQTMCPIEGEGNIARFLFSLFGQKH NAVNATLIDSWVDIAIFQLKEGSSKEKAAVFRSMNSALGKSPWLAGNELTVADVVLWSVLQQIGGCSVTVPANVQ RWMRSCENLAPFNTALKLLK

FIGURE 2180

ACTCCGGGGTCCGCAAGCGCGAAGAGGAGGGCGACGGGGCTGTGGGCTGTGGCTGCGCCGGCCATCGACTTTC CCGCCGAGGCCCGGACCCCGAATATGACGAATCTGATGTTCCAGCAGAAATCCAGGTGTTAAAAGAACCCCTAC AACAGCCAACCTTCCCTTTTGCAGTTGCAAACCAACTCTTGCTGGTTTCTTTGCTGGAGCACTTGAGCCACGTGC ATGAACCAAACCCACTTCGTTCAAGACAGGTGTTTAAGCTACTTTGCCAGACGTTTATCAAAATGGGGCTGCTGT CTTCTTTCACTTGTAGTGACGAGTTTAGCTCATTGAGACTACATCACAACAGAGCTATTACTCACTTAATGAGGT CTGCTAAAGAGAGAGTTCGTCAGGATCCTTGTGAGGATATTTCTCGTATCCAGAAAATCAGATCAAGGGAAGTAG CCTTGGAAGCACAAACTTCACGTTACTTAAATGAATTTGAAGAACTTGCCATCTTAGGAAAAGGTGGATACGGAA AAACAGTTTGCATGAAGGTCCTACGGGAAGTGAAGGTGCTGGCAGGTCTTCAGCACCCCAATATTGTTGGCTATC AAGTGCTCTCCGACCAGGAAGAGGACAGAGAGCAATGTGGTGTTAAAAATGATGAAAGTAGCAGCTCATCCATTA TCTTTGCTGAGCCCACCCCAGAAAAAGAAAACGCTTTGGAGAATCTGACACTGAAAATCAGAATAACAAGTCGG TGAAGTACACCACCAATTTAGTCATAAGAGAATCTGGTGAACTTGAGTCGACCCTGGAGCTCCAGGAAAATGGCT TGGCTGGTTTGTCTGCCAGTTCAATTGTGGAACAGCAGCTGCCACTCAGGCGTAATTCCCACCTAGAGGAGAGTT TGCACATCCAGATGCAGCTGTGAGCTCTCGCTGTGGGATTGGATAGTCGAGAGAAACAAGCGGGGCCGGGAGT ATGTGGACGAGTCTGCCTGTCCTTATGTTATGGCCAATGTTGCAACAAAATTTTTCAAGAATTGGTAGAAGGTG TGTTTTACATACATACATGGGAATTGTGCACCGAGATCTGAAGCCAAGAAATATTTTTCTTCATGGCCCTGATC AGCAAGTAAAAATAGGAGACTTTGGTCTGGCCTGCACAGACATCCTACAGAAGAACACAGACTGGACCAACAGAA ACGGGAAGAGAACACCAACACATACGTCCAGAGTGGGTACTTGTCTGTACGCTTCACCCGAACAGTTGGAAGGAT CTGAGTATGATGCCAAGTCAGATATGTACAGCTTGGGTGTGGTCCTGCTAGAGCTCTTTCAGCCGTTTGGAACAG AAATGGAGCGAGCAGAAGTTCTAACAGGTTTAAGAACTGGTCAGTTGCCGGAATCCCTCCGTAAAAGGTGTCCAG TGCAAGCCAAGTATATCCAGCACTTAACGAGAAGGAACTCATCGCAGAGACCATCTGCCATTCAGCTGCTGCAGA GTGAACTTTTCCAAAATTCTGGAAATGTTAACCTCACCCTACAGATGAAGATAATAGAGCAAGAAAAAGAAATTG CAGAACTAAAGAAGCAGCTAAACCTCCTTTCTCAAGACAAAGGGGTGAGGGATGACGGAAAGGATGGGGGCGTGG GATGAAAGTGGACTTAACTTTTAAGGTAGTTAACTGGAATGTAAATTTTTAATCTTTATTAGGGTATAGTTGGTA CAATGCTTCGTTGTATTTAGTAAGCCTTTACAAGACTTGTTAAAGATGTCAGAGTGCCCCAAGCTGCCGTTCCTT TTCTACCGCAGAAATTGATGTGTGCTCCCTGCCCTCGTCACTGCCCAAGCCCGGGCCTGCACATACTCACTGGAC TGTTCCAGTTTTGACAGCTGCCAGTCTTCCTGCCCCTTTCACACTGCAGCTGAAGTTCATTACCTGAAGGACGCC TCATCATTCATTCCTTGGCTCCAAACCTTCTGCTGCCTCTAAGATAAAAGCTCAACTTCTTAACAGTGTACAGT GTGCAACTTCCAACCTTTTTATCTGTTCTCCCACCTTCAGTTTAGCGTCATTCCAAAACCACACCCTTGCAAAG CTTTGTACTCCGCACCCCAGATGATCTCCAGGCAGCTCAGATCTCTTTCCTGCCTTTGCCCTGCACTGTTCCCCG GTACTTCCTCCTTTATTGTAGCACTCAGCTCCCCAGCCAATCTGTACATCCCTCAGAGGCAGCGATCTGATGAAT TGGTTTTTGAATCCCAGAAAGGGTCTGCCATGGAGTTGGCAGTCATCACGGTAGATGGCGTATGATTTTGCTGAA TTTTAAATAAATGAAAACCATAAAAAAAAAAAAAAA

MQGGNSGVRKREEEGDGAGAVAAPPAIDFPAEGPDPEYDESDVPAEIQVLKEPLQQPTFPFAVANQLLLVSLLEH
LSHVHEPNPLRSRQVFKLLCQTFIKMGLLSSFTCSDEFSSLRLHHNRAITHLMRSAKERVRQDPCEDISRIQKIR
SREVALEAQTSRYLNEFEELAILGKGGYGRVYKVRNKLDGQYYAIKKILIKGATKTVCMKVLREVKVLAGLQHPN
IVGYHTAWIEHVHVIQPRADRAAIELPSLEVLSDQEEDREQCGVKNDESSSSSIIFAEPTPEKEKRFGESDTENQ
NNKSVKYTTNLVIRESGELESTLELQENGLAGLSASSIVEQQLPLRRNSHLEESFTSTEESSEENVNFLGQTEAQ
YHLMLHIQMQLCELSLWDWIVERNKRGREYVDESACPYVMANVATKIFQELVEGVFYIHNMGIVHRDLKPRNIFL
HGPDQQVKIGDFGLACTDILQKNTDWTNRNGKRTPTHTSRVGTCLYASPEQLEGSEYDAKSDMYSLGVVLLELFQ
PFGTEMERAEVLTGLRTGQLPESLRKRCPVQAKYIQHLTRRNSSQRPSAIQLLQSELFQNSGNVNLTLQMKIIEQ
EKEIAELKKQLNLLSQDKGVRDDGKDGGVG

ATGCAGGCCATCAAGTGTGTGGTGGTGGGAGACGGAGCTGTAGGTAAAACTTGCCTACTGATCAGTTACACAACC
AATGCATTTCCTGGAGAATATATCCCTACTGTCTTTGACAATTATTCTGCCAATGTTATGGTAGATGGAAAACCG
GTGAATCTGGGCTTATGGGATACAGCTGGACAAGAAGATTATGACAGATTACGCCCCCTATCCTATCCGCAAACA
GATGTGTTCTTAATTTGCTTTTCCCTTGTGAGTCCTGCATCATTTGAAAATGTCCGTGCAAAGTGGTATCCTGAG
GTGCGGCACCACTGTCCCAACACTCCCATCATCCTAGTGGGAACTAAACTTGATCTTAGGGATGATAAAGACACG
ATCGAGAAACTGAAGGAGAAGAAGCTGACTCCCATCACCTATCCGCAGGGTCTAGCCATGGCTAAGGAGATTGGT
GCTGTAAAATACCTGGAGTGCTCGGCGCTCACACACGCGAGGCCTCAAGACAGTGTTTGACGAAGCGATCCGAGCA
GTCCTCTGCCCGCCTCCCGTGAAGAAGAGAAAAAATGCCTGCTGTTGTAA

 ${\tt MQAIKCVVVGDGAVGKTCLLISYTTNAFPGEYIPTVFDNYSANVMVDGKPVNLGLWDTAGQEDYDRLRPLSYPQTDVFLICFSLVSPASFENVRAKWYPEVRHHCPNTPIILVGTKLDLRDDKDTIEKLKEKKLTPITYPQGLAMAKEIGAVKYLECSALTQRGLKTVFDEAIRAVLCPPPVKKRKKCLLL$

 ${\tt GCCGCCGCC} \underline{\textbf{ATG}} \textbf{AACATTTTCCGGCTGACTGGGGACCTGTCCCACCTGGCGGCCATCGTCATCCTGCTGCTG}$ AAGATCTGGAAGACGCGCTCCTGCGCCGGTATTTCTGGGAAAAGCCAGCTTCTGTTTGCACTGGTCTTCACAACT CGTTACCTGGATCTTTTTACTTCATTTATTTCATTGTATAACACATCTATGAAGGTTATCTACCTTGCCTGCTCC TATGCCACAGTGTACCTGATCTACCTGAAATTTAAGGCAACCTACGATGGAAATCATGATACCTTCCGAGTGGAG TTCTCCATCTACCTGGAGTCCGTGGCTATCCTTCCGCAGCTGTTTATGATCAGCAAGACTGGGGAGGCCGAGACC ATCACCACCACTACCTGTTCTTCCTGGGCCTCTATCGTGCTTTGTATCTTGTCAACTGGATCTGGCGCTTCTAC TTTGAGGGCTTCTTTGACCTCATTGCTGTGGTGGCCGGCGTAGTCCAGACCATCCTATACTGTGACTTCTTCTAC TTGTACATTACAAAAGTACTCAAGGGAAAGAAGCTCAGTTTGCCAGCATAAGTGCCAAAGACCATCACCAGCATC ${\tt TGTCCTTCAGGGTGCTCGGACAGAATTCTTACCACAGCAAAGGCATAAGATGCTTGATACGGAAAATCAGAAACT}$ TAACTCTTTTGTTGCAGATAGTCATCAGTGGCTCTGTAAAAACGCAGAGGAAAAGAGCCAGAAGGTTTCTGTTTA ${\tt ATGCATCTTGCCTTATCTTTTTTTATTACTGTGTACAAAGATTTTTTTACACAAAGAAACTTAATGCTGTATTAA}$ TAAATTCAGTGTGTAGCTTCAATTGGGATAGTTCCAAAAGTGAAGATTTTGTGAGGAATAAGTGCAAATTTTTTT TTTATTTTAAAAAATTCTTTGAAACTCTTAAGTCTTTGTGTCTGCAATGAAATTGTACTCCTTGACAGTTGATAG TGAAATCTGAGACACTATGTTCAATTGG

MNIFRLTGDLSHLAAIVILLLKIWKTRSCAGISGKSQLLFALVFTTRYLDLFTSFISLYNTSMKVIYLACSYATV YLIYLKFKATYDGNHDTFRVEFLVVPVGGLSFLVNHDFSPLEILWTFSIYLESVAILPQLFMISKTGEAETITTH YLFFLGLYRALYLVNWIWRFYFEGFFDLIAVVAGVVQTILYCDFFYLYITKVLKGKKLSLPA

ATCAGCGACATCCGCCACTCGCTGCTGCGCCGCGATGCGCTGAGCGCCCCCAAGGAGGTGTTGTACCACCTGGAC ATCTACTTCAGCAGCCAGCTGCAGAGCGCCCCCTGCCCATCGTGGACAAGGGCCCCGTGGAGCTGCTGGAGGAG TTCGTGTTCCAGGTGCCCAAGGAGCGCAGCGCAGCCCAAGAGACTGAATTCCCTTCAGGAGCTTCAACTTCTT GAAATCATGTGCAATTATTTCCAGGAGCAAACCAAGGACTCTGTTCGGCAGATTATTTTTCATCCCTTTTCAGC CCTCAAGGGAACAAAGCCGATGACAGCCGGATGAGCTTGTTGGGAAAACTGGTCTCCATGGCGGTGGCTGTGTGT CGAATCCCGGTGTTGGAGTGTGCTGCCTCCTGGCTTCAGCGGACGCCCGTGGTTTACTGTGTGAGGTTAGCCAAG GCCCTTGTAGATGACTACTGCTGTTTTGGTGCCGGGATCCATTCAGACGCTGAAGCAGATATTCAGTGCCAGCCCG AGATTCTGCTGCCAGTTCATCACCTCCGTTACCGCGCTCTATGACCTGTCATCAGATGACCTCATTCCACCTATG GACTTGCTTGAAATGATTGTCACCTGGATTTTTGAGGACCCAAGGTTGATTCTCATCACTTTTTTAAATACTCCG ATTGCGGCCAATCTGCCAATAGGATTCTTAGAGCTCACCCCGCTCGTTGGATTGATCCGCTGGTGCGTGAAGGCA CCCCTGGCTTATAAAAGGAAAAAGAAGCCCCCCTTATCCAATGGCCATGTCAGCAACAAGGTCACAAAAGGACCCG GGCGTGGGGATGGACAGAGACTCCCACCTCTTGTACTCAAAACTCCACCTCAGCGTCCTGCAAGTGCTCATGACG CTGCAGCTGCACCTGACCGAGAAGAATCTGTATGGGCGCCTGGGGCTGATCCTCTTCGACCACATGGTCCCGCTG GTAGAGGAGATCAACAGGTTGGCGGATGAACTGAACCCCCTCAACGCCTCCCAGGAGATTGAGCTCTCGCTGGAC CGGCTGGCGCAGGCTCTGCAGGTGGCCATGGCCTCAGGAGCTCTGCTGTGCACGAGAGATGACCTTGAGAACCTTG TGCTCCAGGCTGCCCCATAATAACCTCCTCCAGCTGGTGATCTCGGGTCCCGTGCAGCAGTCGCCTCACGCCGCG CTCCCCCGGGGTTCTACCCCCACATCCACACGCCCCGCTGGGCTACGGGGCTGTCCCGGCCCACCCCGCCGCC CACCCGCCCTGCCCACGCACCCCGGCCACACCTTCATCTCCGGCGTGACCTTTCCCTTCAGGCCCATCCGCTAG

MSDIRHSLLRRDALSAAKEVLYHLDIYFSSQLQSAPLPIVDKGPVELLEEFVFQVPKERSAQPKRLNSLQELQLL EIMCNYFQEQTKDSVRQIIFSSLFSPQGNKADDSRMSLLGKLVSMAVAVCRIPVLECAASWLQRTPVVYCVRLAK ALVDDYCCLVPGSIQTLKQIFSASPRFCCQFITSVTALYDLSSDDLIPPMDLLEMIVTWIFEDPRLILITFLNTP IAANLPIGFLELTPLVGLIRWCVKAPLAYKRKKKPPLSNGHVSNKVTKDPGVGMDRDSHLLYSKLHLSVLQVLMT LQLHLTEKNLYGRLGLILFDHMVPLVEEINRLADELNPLNASQEIELSLDRLAQALQVAMASGALLCTRDDLRTL CSRLPHNNLLQLVISGPVQQSPHAALPPGFYPHIHTPPLGYGAVPAHPAAHPALPTHPGHTFISGVTFPFRPIR

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GGCACGAGGAAGCTACTCAGATAAGAGGCTCCAAGAGGACATTTTTGGATGTGAAAAACAATGAGAAGGAGGACA ACACACATTTACAATCGTCTTAATTTTGTACTCAGAAAAAGGATGTGAAGACAATGCACAGGGAATACAATAGTT TCAGATCTGTGTACAGTTTCCTTTTGCTTCATCTCCTGCAACAATGTAATGAAGACACCATGATATCATTAACAT TTCACACAAAAGGAAAATGAGGCTGAAATGGTGTGGGGCAAGGCCCAGGAATCTGGAGCATCCCTAACCAAGCAGC AATTTACCACATTCTTCTTACTTATTTTATGAGATACTATTCTTCCAAGGTGGAGAAAGTGGAGAAAGTAGAGTG ACGCAGCTAAGGGAGTAAATCGACCCTCAGCCAACAAGTGGCAAAAGCCTGAAGAAAGTGATCAACAGAT GACCCCGCGGCCCATCTCCAAGGGGGGGGGTATCACAACCCCGACGCCACACCACGTATCATTCCGCAAAACTCC CGCGCCTCCCACGCAGAACTGGCAAGAGGGGAAGGCGAGACAGCAGTGAACAGCTGGTACGCAGCACCCACAGCAC CGCGGCAGCAGCTAGTGCCGACTCCCGCCTAGCTCTTTTGACTCTGTTCGCGGGAAGAATGGGGAAACAGTAAGG TTGCGGCGCCTCCCGCGAGACGAGGTACCTGAGGCTGGCCCCGCAGTCCCCCGCCGCACCAGCACCGGAGCTTCA CACCCCACTTCCGGGGTCAAGTCACCGCCGGGAATCCTGTGATCGCAGAAAGGTAGTCTCAGGTTCCGCCCCTAT CTCCACTTCCGGACTCATCCAGCCCTTCTCCACCCCTTTCAGAGACAGCGCGATTGCGATTTAGGTTTCCGCGC ATTTAATTGGCGAAGCTGGAGCGCTAGTCTTCGCTGATTGGTGCCGAGAAATCTGCCCCATAGACACCCGCGGGG CGCACAGTTTCAGTCGTCCGTGGGTTTCCCGCCAGCCGCAGTCTTGGACCATAATCATCATGGACATGATGGACT TGCCCAGGTCGCGCATCAACGCCGGCATGCTAGCTCAATTCATCGACAAGCCTGTCTGCTTCGTAGGGAGGCTGG AAAAGATTCATCCCACCGGAAAAATGTTTATTCTTTCAGATGGAGAAGGAAAAAATGGAACCATCGAGTTGATGG AACCCCTTGATGAAGAAATCTCTGGAATTGTGGAAGTGGTTGGAAGAGTAACCGCCAAGGCCACCATCTTGTGTA CATCTTATGTCCAGTTTAAAGAAGATAGCCATCCTTTTGATCTTGGACTTTACAATGAAGCTGTGAAAATTATCC ${\tt ATGACTTCCCTCAGTTTTATCCTTTAGGGATTGTGCAACATGAT}{{\tt TGAT}}{\tt TCTTGATGGATTTTCATACGATTGTAAA}$

WO 2004/030615 PCT/US2003/028547

2380/6881 FIGURE 2189

 ${\tt MVDMMDLPRSRINAGMLAQFIDKPVCFVGRLEKIHPTGKMFILSDGEGKNGTIELMEPLDEEISGIVEVVGRVTAKATILCTSYVQFKEDSHPFDLGLYNEAVKIIHDFPQFYPLGIVQHD}$

FIGURE 2190

 ${\tt MTILINCNTTIPTKQTQTFITYSDNQPGVLIQVYEGERAMSKDNNLLGKFEFTGIPPEPQGVPQIEVTFDIDANGILSVSAVDKSTGKENKITITNNKGHLSKEDIERMVQEAEN}$

(

2384/6881 FIGURE 2193

WO 2004/030615 PCT/US2003/028547

2385/6881 FIGURE 2194

 ${\tt MLRQIIGQAKKHPSLIPLFVFIGTGATGATLYLLRLALFNPDVCWDRNNPEPWNKLGPNDQYKFYSVNVDYSKLKKERPDF}$

GCCATCTTCCAGTAATTCGCCAAAATGACGAACACAAAGGGAAAGAGGAGGCACCCGATATATGTTCTCTAGG CCTTTTAGAAAACATGGAGTTGTTCCTTTGGCCACATATATGCGAATCTATAAGAAAGGTGATATTGTAGACATC AAGGGAATGGGTACTGTTCAAAAAGGAATGCCCCACAAGTGTTACCATGGCAAAACTGGAAGAGTCTACAATGTT ACCCAGCATGCTGTTGGCATTGTTGTAAACAAACAAGTTAAGGGCAAGATTCTTGCCAAGAGAATTAATGTGCGT ATTGAGCACATTAAGCACTCTAAGAGCCGAGATAGCTTCCTGAAACGTGTGAAGGAAAATGATCAGAAAAAAGAAA GAAGCCAAAGAGAAAGGTACCTGGGTTCAACTAAAGCGCCAGCCTGAGCTGCTGGAACCTATTCCCTATGAATTC ATGGCATAATAGGTGTT

MTNTKGKRRGTRYMFSRPFRKHGVVPLATYMRIYKKGDIVDIKGMGTVQKGMPHKCYHGKTGRVYNVTQHAVGIV VNKQVKGKILAKRINVRIEHIKHSKSRDSFLKRVKENDQKKKEAKEKGTWVQLKRQPELLEPIPYEFMA

GCTCGGGCGCGGGCGTTCTTGGTGCGCCGGGCCGTGGTGAGTCCGGGCTCCCGTGGCCGCGTGCTGGGAGGAGA CTGGAGCCCGGTTAGGAAGAATGGAGTTGGCGACTCGCTACCAGATCCCTAAAGAAGTGGCTGACATCTTTAACG CCCCCAGTGATGATGAAGAGTTTGTTGGCTTCCGAGATGATGTTCCCATGGAAACCCTCTCGTCAGAGGAGAGCT GCGATAGTTTTGACTCACTAGAGTCAGGGAAACAGCAGGATGTGCGCTTTCATTCCAAATACTTCACAGAAGAGC TAAGAAGAATTTTTATAGAGGACACTGACTCAGAGACTGAGGATTTTGCAGGATTTACGCAGAGTGATCTGAATG GAAAGACTAACCCAGAAGTAATGGTCGTGGAGTCAGATTTGAGTGATGGTGAAGCATCTTTGGTGAGCGAGG AAGAGGAAGATGAAGAAGAAGATAAGGCTACCCCTAGAAGAAGCAGGTCTAGAAGAAGTAGTATTGGTCTTCGAG TAGCCTTTCAGTTCCCCACCAAGAAGCTGGCCAACAAACCAGATAAAAACAGTTCTTCCGAGCAGTTGTTTTCTA ATTCTACCTCTGAGTCTGAGGATGACTCTCGGGATGAGAGCCAGGAGGTTCAGATGCTTTGCTGAAAAGGACCA TGAACATCAAGGAGAACAAAGCCATGCTTGCCCAGTTATTGGCGGAATTGAACTCGATGCCAGATTTCTTCCCAG TACGAACCCCAACCTCAGCTTCTAGGAAGAAGACAGTGAGGCGGGCCTTCTCGGAGGGACAGATCACGCGGCGTA TGAACCCAACCCGGAGTGCGCGGCCTCCTGAGAAGTTTGCTCTAGAGAACTTCACTGTCTCAGCCGCTAAATTTG CGGAAGAGTTTTACAGCTTCCGAAGAAGGAAGACAATTGGGGGGAAATGCCGGGAGTACAGACGACGTCACCGTA : TATCTTCTTTTCGGCCAGTGGAGGATATCACCGAAGAGGACTTAGAAAATGTTGCCATAACTGTTCGAGATAAAA TCTATGATAAAGTTCTGGGTAACACGTGCCATCAGTGTCGACAAAAGACCATCGACACCAAGACAGTGTGTCGGA ACCAGGGTTGCTGTGGTGCGAGGACAGTTCTGTGGACCATGCCTGCGGAACCGCTATGGGGAGGATGTCAGAT CGGCATTGCTGGACCCGGATTGGGTGTCCCCCCTGTCGTGGGATCTGCAATTGCAGCTACTGTCGGAAGCGTG ACGGCCGCTGTGCCACAGGAATCCTCATTCATCTGGCCAAGTTTTATGGTTATGACAATGTTAAGGAATATCTGG TCCAACAAGACATGCATACCATTGGTGCCTAAGATTTATTAAAACTTGACTGAACAAAAGGGGACCATCAACATT TGTTGCCCAGGAGGGAGTGCAGTGGTGCAACCTCGGCTCACTGCAACCTTTGCCTCCTAGGTTCAAGTGATTCTC TGACTTTCACTCTAAGGATAGCGTTGAAAAAAGAATGCACGTGTGAGTTACTAAAAAGTTAGAATAATGTGCATG GGAACAGTGCAGCAACATGCTAGAAAATCCTCACTGCACTCCAGCAGAGGCTAGAGGAATGCCAGTGTTACCTTA GATGTAGCTGGGGCCTCTCAGTTTGGTTCTATACACAGGGCACTCGTAGGTCTGTTTGGTTTCTTGTCCAC GGGGGTGGCTTTTGCAAAGATGACCGGCATAGGGCATGCCAGCTCCTTGAGACGGGCTTCAACAATGGTTCCTGC TTGGGTGTCCCAGCGGGCGCCTATGGCAAAAACACAGCGGTTGCAATTGTGTGGCAGCTTGCTACTAATGATAAT GATCAAGTAAGTTGTTTGATGCAATAAACATTCAACATTCTGGTTTTGTCAT

2389/6881 FIGURE 2198

CTTTTTCGCAACGGGTTTGCCGCCAGAACACAGGTGTCGTGAAAACTACCCCTAAAAGCCAAAATGGGAAAGGAA AAGACTCATATCAACATTGTCGTCATTGGACACGTAGATTCAGGCAAGTCCACCACTACTGGCCATCTGATCTAT AAATGCGGTGGCATCGACAAAAGAACCATTGAAAAATTTGAGAAGGAGGCTGCTGAGATGGGAAAGGGCTCCTTC AAGTATGCCTGGGTCTTGGATAAACTGAAAGCTGAGCGTGAACGTGGTATCACCATTGATATCTCCTTGTGGAAA TTTGAGACCAGCAAGTACTATGTGACTATCATTGATGCCCCAGGACACAGGGACTTCATCAAAAACATGATTACA GGGACATCTCAGGCTGACTGTGCTGTCCTGATTGTTGCTGCTGGTGTTGGTGAATTTGAAGCTGGTATCTCCAAG AATGGGCAGACCCGAGAGCATGCCCTTCTGGCTTACACACTGGGTGTGAAACAACTAATTGTCGGTGTTAACAAA ATGGATTCCACTGAGCCACCCTACAGCCAGAAGAGATATGAGGAAATTGTTAAGGAATCAGCACTTACATTAAGA AAATTGGCTACAACCCCGACACAGTAGCATTTGTGCCAATTTCTGGTTGGAATGGTGACAACATGCTGGAGCCAA GTGCTAACATGCCTTGGTTCAAGGGATGGAAAGTCACCCGTAAGGATGGCAATGCCAGTGGAACCACGCTGCTTG AAATTGGTGGTATTGGTACTGTTCCTGTTGGCCGAGTGGAGACTGGTGTTCTCAAACCCGGTATGGTGGTCACCT TTGCTCCAGTCAACGTTACAACGGAAGTAAAATCTGTCGAAATGCACCATGAAGCTTTGAGTGAAGCTCTTCCTG GGGACAATGTGGGCTTCAATGTCAAGAATGTGTCTGTCAAGGATGTTCGTCGTGGCAACGTCGCTGGTGACAGCA AAAATGACCCACCAATGGAAGCAGCGGGCTTCACTGCTCAGGTGATTATCCTGAACCATCCAGGCCAAATAAGCA ATCGCCGTTCTGGTAAAAAGCTGGAAGATGGCCCTAAATTCTTGAAGTCTGGTGATGCTGCCATTGTTGATATGG TTCCTGGCAAGCCCATGTGTTGAGAGCTTCTCAGACTATCCACCTTTGGGTCGCTTTGCTGTTCGTGATATGA GACAÇACAGTTGCGGTGGGTGTCATCAAAGCAGTGGACAAGAAGGCTGCTGGAGCTGGCAAGGTCACCAAGTCTG CCCAGAAAGCTCAGAAGGCTAAATGAATATTATCCCTAATACCTGCCACCCCACTCTTAATCAGTGGTGGAAGAA TGGTCTCAGAACTGTTTGTTTCAATTGGCCATTTAAGTTTAGTAGTAAAAGACTGGTTAATGATAACAATGCATC GTAAAACCTTCAGAAGGAAAGGAGAATGTTTTGTGGACCACTTTGGTTTTCTTTTTTGCGTGTGGCAGTTTTAAG TTATTAGTTTTTAAAATCAGTACTTTTTAATGGAAACAACTGGACCAAAAATTTGTCACAGAATTTTGAGACCCA TT

MLEPSANMPWFKGWKVTRKDGNASGTTLLEALDCILPPTHPTDKPLRLPLQDVYKIGGIGTVPVGRVETGVLKPG
MVVTFAPVNVTTEVKSVEMHHEALSEALPGDNVGFNVKNVSVKDVRRGNVAGDSKNDPPMEAAGFTAQVIILNHP
GQISTGYAPVLDCHTAHIACKFAELKEKIDRRSGKKLEDGPKFLKSGDAAIVDMVPGKPMCVESFSDYPPLGRFA
VRDMRQTVAVGVIKAVDKKAAGAGKVTKSAQKAQKAK

MVTTCWSQVLTCLGTMLLEALDCILPPTRPTDKPLHLPLQDVYKIGGIGSVPVGRVETGVLKPGMVVTFAPVNVT TEVKSVEMHHEALSEALPGDNVGFNVKNVSVKDVRHGNVAGDSKNDPPMEAAGFTAQVIILNHPGQISTGYAPVL DCHTAHIACKFAELKEKIDHRSGNMVPGKPMCVESFSDYPSLGCFAVRDMRQIVTVGVIKAVDKKTAGAGKVTKS AQKAQKAK

GTGAAAACTACCCCTAAAAGCCAAAATGGGAAAGGAAAAGACTCATATCAACATTGTCGTCATTGGACACGTAGA
TTCAGGCAAGTCCACCACTACTGGCCATCTGATCTATAAATGCGGTGGCATCGACAAAAGAACCATTGAAAAATT
TGAGAAGGAGGCTGCTGAGATGGGAAAGGGCTCCTTCAAGTATGCCTGGGTCTTGGATAAACTGAAAGCTGAGCG
TGAACGTGGTATCACCATTGATATCTCCTTGTGGGGCAGACCCGAGAGCATGCCCTTCTGGCTTACACACTGGGT
GTGAA

GAAAACTACCCCTAAAAGCCAAAATGGGAAAGGAAAAGACTCATATCAACATTGTCGTCATTGGACACGTAGATT
CAGGCAAGTCCACCACTACTGGCCATCTGATCTATAAATGCGGTGGCATCGACAAAAGAACCATTGAAAAATTTG
AGAAGGAGGCTGCTGAGATGGGAAAGGGCTCCTTCAAGTATGCCTGGGTCTTGGATAAACTGAAAGCTGAĢCGTG
AACGTGGTATCACCATTGATATCTCCTTGTGGAAATTTGAGACCAGCAAGTACTATGTGACTATCATTGATGCCC
GGGACATCTCAGGCTGACTGTCCTGATTGTTGCTGCTGGTGTTGGTGAATTTGAAGCTGGTATCTCCAAG
AATGGGCAGACCCGAGAGCATGCCCTTCTGG

2396/6881 FIGURE 2205

2397/6881 FIGURE 2206

MVKLSKEAKQRLQQLFKGSQFAIRWGFIPLVIYLGFKRGADPGMPEPTVLSLLWG

2399/6881 FIGURE 2208A

GGACGTCCGGCTTCGGAGCGGGAGTGTTCGTTGTGCCAGCGACTAAAAAGAGAAATTAAATAAGGGTGATGTTGAG AAAGGCAAGAAGATTTTTATTATGAAGTGTTCCCAGTGCCACACCGTTGAAAAGGGAGGCAAGCACAAGACTGGG CCAAATCTCCATGGTCTCTTTGGGCGGAAGACAGGTCAGGCCCCTGGATACTCTTACACAGCCGCCAATAAGAAC AAAGGCATCATCTGGGGAGAGGATACACTGATGGAGTATTTGGAGAATCCCAAGAAGTACATCCCTGGAACAAAA ATGATCTTTGTCGGCATTAAGAAGAAGGAAGAAAGGGCAGACTTAATAGCTTATCTCAAAAAAAGCTACTAATGAG TAATAATTGGCCACTGCCTTATTTATTACAAAACAGAAATGTCTCATGACTTTTTTATGTGTACCATCCTTTAAT AGATCTCATACACCAGAATTCAGATCATGAATGACTGACAGAATATTTTGTTGGGCAGTCCTGATTTAAAACTAA GACTGGCTTGTGGTTAAATGAATATGTTCAGTTTTTGAATTTTAATAGTAACTCCAATTCAGTAAATGGTATCAC TGTTTACCCCTTTTAAAGATATGATTAGACTTCGTTAGTAATGTTCAACTTTTCACAAAGATGGTGAGTGCCATC TTAAAACTTACTGGAGATTGGTTTTATATTTAGATTTATATAACTGGTTATGTGAATATATTTAAATACTGGGGA AATTGCTTCACTGTCTTAGAACCAAGCAAGATTCACCTGTGTTTTGTGTTCATGTTCATTTGCCTCTTAAAGGCA AGGGTTGAAGATAAATAAGGTTGCAATGTCTATAGTTTTGGCCTTAACTATGCCAATCTAATTATAATTCCCTGT ATTTAAAATGGTTTCTTTTACTTATTGAAAGGCATTTTAGTGTGGTTTATGTGTAATATTAAAGATTATTCAACA CCTCTCACATCTTACAGATCTATAAGGTCACATGCTTTTAAAATAGTAGCAAGTTAAACTTCACTCTTGAATTCT GTGTATTTGATTGGGAATGGTGCTTTTGCCAACTTAAAAGGATTAAAGTAACGGAGATATACACAAATTTTAAAA TTATGTGTGATCACAAGACTAAAGATAATTAAAAAGAAAACCACAGATCATGACTTTTTGACTGTGCTTGATTTC ATGACTGATGCACAAATTTTAATGATTAAAAAGTGCAGGAGCCCTAAATGTCAGTGCAGCAGCCCTAAATGTCAG TGCAGCAGTGTTAACCAGTCATGGTGCTAGATTGTTTACTTGGTTTTCTAGGACTGCCTCAACTAGAATAACACT TCACTAATTGACTCTTAGTTTCTTTGCTCAGATTGAGAACTGCAGCATTTATGCCAGACATGGACAGAGAATGC CTGTGGTCATAGTTTTGTGATGTGTAACAGTGTATAATTACATACTGAATTATTTCATGCATAGTCTGTGCCATA CACATTTAGAGTAGTCCTTGGAGATTTTATGGAGATGGTGAGCACAAGGTAAGTCATAAAGAATAATGAGAAAAT AAATCTATGCTGGTGCAGCTGAGAACTGTATCTTTGTGGGACAGTGAGAAGACTGAGAAGATGTGAATCCATGGT CTCAAAGGTGATAGGGACGATTAGATAGGTGTTTTAAGGCCTGAAAGCAATTTATAACATATGAGTCTTATTTTT ATTTATAGAAATGTGGAAAGCTTGCTGTAATTCATATTTGAAGTCCTAGTCTGAGTTCTGGTGGGGAATTTAAAA ATGCATCCTGGAAATCCTTTAAAGATTTCAGACTTTGAAAGGCCTTGTAGCAGAGGACTTGGTGACTGTATAAAG TTAGTGGTATTCAGGGACAGTGTAGCAAGTAGCTTACAAGGGGACAATTCTGGACTAATGAGAAAGACCTGAAGT CAAGGCTGGAGTGCAGTGCGATCTCGGCTGGCTGCAGCCTCTATTTCCCAGGCTCAAGCGATTCTCTCACTT CCATGTGGTCCCAGGCTGGTCTCAAACTCCTGAGCTCAAGCAATCCGTCCACTTGCCTTGGCTCCCCAAAGTGCT GGGATTGCAGGCGTGAGCCACCAGGCCCTGCCTGGTTTTCAAATTCAGAAATCTTATTATTTAACCCAGAAGTAA TTTCGCCCTTTTCGCCCAGGCTGAGTACAGTGGTGCAATCTCACTGCAACCTCCGCCTTCCAGTTGCAAGTGATT CAAAGTTCTAGGATTACAGGTGTGAGCCACCACGTCCGGCCAATTTTTCTCATTTCTATGCCTCCTATATTAAGG TCTGTGTTGGCACAGATGAGTAACTGCCATGTTCTAGGTCAGTTATACCCAAGCACTTCTGGTGGTTTAAAATGT GATTCTGTAACTTTTTTATTTTTTTTTTTTGAGATAATTTCACTCTTGTTGCCCAGGCTGGAGTGCAATGGCGT GATCGCTGCTCACCGCAACCTCCGCCTTCCAGGTTCAAGCGATTCTCCTGACTCAGCCTCTCAAGTAGCTGGGAT TACAAGCATGCGCCACCATGCCCAGCTTATTTTGTGTTTTTAGTAGAGACAGGGTTTCTCCATGCTGGACAGGCT GGTCTTGAACTCCCGACGTCGGGTGATCTGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCAC CACGCCTGGCCAATTATGTAATTTTTTAAAAAGGACATTTCTATCAGGGATATATACCTTCAGAAATAAGGAAAT AGGGGAAAAAAGAGCACTATAAACCACATGTTTTCATTTCTAGTGCTTCGCTGTAAGTGGCTAGGTTGGTAGAA TCAAAAACAAGGGCCAGATGTATTTAAGGGGTATTCAGATGCCACCTACATGCTTATTTTGTCTAGAACAGTGCT GTCTAATAGAACTTTCTGTGACGATGGATATTTTGTAGACTTTTGCTGTCCAGTGTGGTAGCCACTAACCACATG TGGCTGTTAAGCCCTTGAAATATAGCTAGTGTGACTAGAAAGTATTTTATTTTAAATTTACATAGGCACAAGTGG

2400/6881 FIGURE 2208B

2401/6881 FIGURE 2209

 ${\tt MGDVEKGKKIFIMKCSQCHTVEKGGKHKTGPNLHGLFGRKTGQAPGYSYTAANKNKGIIWGEDTLMEYLENPKKY}\\ {\tt IPGTKMIFVGIKKKEERADLIAYLKKATNE}$

AGTAGCAGCAGCGCCGGGTCCCGTGCGGAGGTGCTCCTCGCAGAGTTGTTTCTCGAGCAGCAGCTCTCACTA ${\tt TGAAGCGACTGAGTCCGCG} \underline{{\tt ATG}} {\tt GAGAGAGAAAAGGAACAGTTCCGTAAGCTCTTTATTGGTGGCTTAAGCTTTGA$ AACCACAGAAGAAAGTTTGAGGAACTACTACGAACAATGGGGAAAGCTTACAGACTGTGTGGTAATGAGGGATCC TGCAAGCAAAAGATCAAGAGGATTTGGTTTTGTAACTTTTTCATCCATGGCTGAGGTTGATGCTGCCATGGCTGC AAGACCTCATTCAATTGATGGGAGAGTAGTTGAGCCAAAACGTGCTGTAGCAAGAGAGGAATCTGGAAAACCAGG GGCTCATGTAACTGTGAAGAAGCTGTTTGTTGGCGGAATTAAAGAAGATACTGAGGAACATCACCTTAGAGATTA CTTTGTTACTTTTGATGACCATGATCCTGTGGATAAAATCGTATTGCAGAAATACCATACCATCAATGGTCATAA ${\tt TGCAGAAGTAAGAAAGGCTTTGTCTAGACAAGAAATGCAGGAAGTTCAGAGTTCTAGGAGTGGAAGAGGAGGCAA}$ ${\tt TGATGGATATGGCAGTGGACGTGGATTTGGGGATGGCTATAATGGGTATGGAGGAGGACCTGGAGGTGGCAATTT}$ GGGCTACGGAGGTGGTTATGACAACTATGGAGGAGGAAATTATGGAAGTGGAAATTACAATGATTTTGGAAATTA TAACCAGCAACCTTCTAACTACGGTCCAATGAAGAGTGGAAACTTTGGTGGTAGCAGGAACATGGGGGGGACCATA $\tt TGGTGGAGGAAACTATGGTCCAGGAGGCAGTGGAGGAGGTGGGGGGGTTATGGTGGGAGGAGCCGATAC \underline{\textbf{TGA}} \texttt{GCTTC}$ TTCCTATTTGCCATGGGCTTCACTGTATAAATAGGAGAGGATGAGAGCCCAGAGGTAACAGAACAGCTTCAGGTT ATCGAAATAACAATGTTAAGGAAACTCTTATCTCAGTCATGCATAAATATGCAGTGATATGGCAGAAGACACCAG GAAGCATTCCTTCTTTGATAATGTTAAATTTGTAAGTTTCAGGTGACATGTGAAACCTTTTTTAAGATTTTTCTC AAAGTTTTGAAAAGCTATTAGCCAGGATCATGGTGTAATAAGACATAACGTTTTTCCTTTAAAAAAATTTAAGTG CGTGTGTAGAGTTAAGAAGCTGTTGTACATTTATGATTTAATAAAATAATTCTAAAGGAAAAAA

MEREKEQFRKLFIGGLSFETTEESLRNYYEQWGKLTDCVVMRDPASKRSRGFGFVTFSSMAEVDAAMAARPHSID GRVVEPKRAVAREESGKPGAHVTVKKLFVGGIKEDTEEHHLRDYFEEYGKIDTIEIITDRQSGKKRGFGFVTFDD HDPVDKIVLQKYHTINGHNAEVRKALSRQEMQEVQSSRSGRGGNFGFGDSRGGGGNFGPGPGSNFRGGSDGYGSG RGFGDGYNGYGGGPGGGNFGGSPGYGGGRGGYGGGGPGYGNQGGGYGGGYDNYGGGNYGSGNYNDFGNYNQQPSN YGPMKSGNFGGSRNMGGPYGGGNYGPGGSGGSGGYGGRSRY

AGTAGCAGCGCCGGGTCCCGTGCGGAGGTGCTCCTCGCAGAGTTGTTTCTCGAGCAGCGGCAGTTCTCACTA TGAAGCGACTGAGTCCGCGATGGAGAAAACTTTAGAAACTGTTCCTTTGGAGAGGAAAAAGGAGAAAAAGGAACA GTTCCGTAAGCTCTTTATTGGTGGCTTAAGCTTTGAAACCACAGAAGAAGTTTGAGGAACTACTACGAACAATG TTCATCCATGGCTGAGGTTGATGCTGCCATGGCTGCAAGACCTCATTCAATTGATGGGAGAGTAGTTGAGCCAAA TAAAGAAGATACTGAGGAACATCACCTTAGAGATTACTTTGAGGAATATGGAAAAATTGATACCATTGAGATAAT TACTGATAGGCAGTCTGGAAAGAAAAGAGGCTTTGGCTTTGTTACTTTTGATGACCATGATCCTGTGGATAAAAT CGTATTGCAGAAATACCATACCATCAATGGTCATAATGCAGAAGTAAGAAAGGCTTTGTCTAGACAAGAAATGCA GGAAGTTCAGAGTTCTAGGAGTGGAAGAGGAGGCAACTTTGGCTTTGGGGATTCACGTGGTGGCGGTGGAAATTT CGGACCAGGACCAGGAAGTAACTTTAGAGGAGGATCTGATGGATATGGCAGTGGACGTGGATTTGGGGATGGCTA TAATGGGTATGGAGGAGGACCTGGAGGTGGCAATTTTGGAGGTAGCCCCGGTTATGGAGGAGGAGGAGGAGGATA TGGTGGTGGAGGACCTGGATATGGCAACCAGGGTGGGGGGCTACGGAGGTGGTTATGACAACTATGGAGGAGGAAA TTATGGAAGTGGAAATTACAATGATTTTGGAAATTATAACCAGCAACCTTCTAACTACGGTCCAATGAAGAGTGG AAACTTTGGTGGTAGCAGGAACATGGGGGGGACCATATGGTGGAGGAAACTATGGTCCAGGAGGCAGTGGAGGAAG GATGAGAGCCCAGAGGTAACAGATCAGCTTCAGGTTATCGAAATAACAATGTTAAGGAAACTCTTATCTCAGTCA TGCATAAATATGCAGTGATATGGCAGAAGACACCAGAGCCAGATGCAGAGAGCCATTTTGTGAATGGATTGGATTA TTGTTGTTTCTTCTAGTGGTCTTTGTAAGAGTGTAGAAGCATTCCTTCTTTGATAATGTTAAATTTGTAAGTTT CAGGTGACATGTGAAACCTTTTTTAAGATTTTTCTCAAAGTTTTTGAAAAGCTATTAGCCAGGATCATGGTGTAAT AAGACATAACGTTTTTCCTTTAAAAAAATTTAAGTGCGTGTGTAGAGTTAAGAAGCTGTTGTACATTTATGATTT

2405/6881 FIGURE 2213

MEKTLETVPLERKKREKEQFRKLFIGGLSFETTEESLRNYYEQWGKLTDCVVMRDPASKRSRGFGFVTFSSMAEV DAAMAARPHSIDGRVVEPKRAVAREESGKPGAHVTVKKLFVGGIKEDTEEHHLRDYFEEYGKIDTIEIITDRQSG KKRGFGFVTFDDHDPVDKIVLQKYHTINGHNAEVRKALSRQEMQEVQSSRSGRGGNFGFGDSRGGGGNFGPGPGS NFRGGSDGYGSGRGFGDGYNGYGGGPGGGNFGGSPGYGGGRGGYGGGPGYGNQGGYGGGYDNYGGGNYGSGNY NDFGNYNQQPSNYGPMKSGNFGGSRNMGGPYGGGNYGPGGSSGSGGYGGRSRY

2406/6881 FIGURE 2214

CGCTGAGGAGACTCCGGTCACTGTCCTCGCCCCGCCTCCCCTTCCCTTGGGGACCACCGGGCGCCACGC AAACAGAATGGAAAGAGTAAAAAGTTGAAGAGGCAGAGCCTGAAGAATTTGTCGTGGAAAAAGTACTAGATCGA CGTGTAGTGAATGGGAAAGTGGAATATTTCCTGAAGTGGAAGGGATTTACAGATGCTGACAATACTTGGGAACCT GAAGAAAATTTAGATTGTCCAGAATTGATTGAAGCGTTTCTTAACTCTCAGAAAGCTGGCAAAGAAAAAAGATGGT ACAAAAAGAAATCTTTATCTGACAGTGAATCTGATGACAGCAAATCAAAGAAGAAAAGAGATGCTGCTGACAAA CTCATGAAATGGAAAGATTCAGATGAGGCAGACTTGGTGCTGGCGAAAGAGGCCAAATATGAAGTGTCCTCAAATT ${\tt GTAATTGCTTTTTATGAAGAGAGACTAACTTGGCATTCTTGTCCAGAAGATGAAGCTCAA\underline{{\tt TAA}}{\tt TTGTTCACATTG}$ TTCTTTTATATATATATATATATATATAAAAATTGGGTCTTAGATTTTGATTTACTAGTGTGACAAAATAACT ACATCCTAATGAAAATCAAGTTTGATATGTTTGTTTTGAAAGTAGCGTTGGAAGAGTTGTTGGGGGGTTTTTTGCA TCCATAGCACTGGTTACTTTGAACAAATAAATAAAAGCTTTCTGTAGTTGCTTCCTTTATCAGAAAAGAACATTT GATACCATGGTATATCATTTCCTCTTCATTAAAGAACAGCTTTTCTAAATGTTGGGGGGAAATGTCCATAGTCATT AAATCACAGGTAAACCCATGTTTCTGAGATGCCATTATTCCAAGCAAAATAAGAGATAATCCCTTCAAGTTAAAT TGAAAATTTTCCTGAAACCATACATTTCAAGTGAAATAAGTAATTCTAGATAGGACAATTTAAATTGGATAATTT TAAAGTGTCTATAATTGCAGTGGTTTATTTGCAAAATTCCTAAAAGGAAAAATTTTATCACTGCCATCACAGCAG GTTTCCTCATCCAGATGAGGAAACTAGACAAATGCTAGTGTTTTTAACTAGCTAAACAAAACTAAGTTAAATGA ACATTTAAAAGTTTCCCTAGCGGGCCATTCCTTAGCAAAATGTTGGAATCCCTGTTGCTACATTGACTAAAAGGT CATGATGAATGGAATATGTAAGACTTGGCTCATAGAAACCTAATCAGATGGTTAGAGGTGTTGGCAGTTTAGGAC CTGCTGTCATAAATGTGTGAACAACCTTTTGTAACCTAACCTATTGACCTGCATGTTTTTTCTTTACCCCAATTC ATTACATGGAGGCTCAATCTTGAGTTTGCTTTACTGGTTCAGCAAAAGCCAGGAAGAACAACTTTGTAGTAATCA ССТТТАТССААААААААААААААААААААААААААА

2407/6881 FIGURE 2215

MASNKTTLQKMGKKQNGKSKKVEEAEPEEFVVEKVLDRRVVNGKVEYFLKWKGFTDADNTWEPEENLDCPELIEA FLNSQKAGKEKDGTKRKSLSDSESDDSKSKKKRDAADKPRGFARGLDPERIIGATDSSGELMFLMKWKDSDEADL VLAKEANMKCPQIVIAFYEERLTWHSCPEDEAQ

TCCCCCGGCGCCCCCCGCGCAGCTCCCGGCTCCCCCCTTCGGATGTGGCTTGAGCTGTAGGCGCGGAGGG CCGGAGACGCTGCAGACCCGCGACCCGGAGCAGCTCGGAGGCGGTGAATAATAGCTCTTCAAGTCTGCAATAAAA ${\tt A\underline{ATG}} {\tt GCCTCCAACAAAACTACATTGCAAAAAATGGGAAAAAACAGAATGGAAAGAGTAAAAAAGTTGAAGAGGC}$ AGAGCCTGAAGAATTTGTCGTGGAAAAAGTACTAGATCGACGTGTAGTGAATGGGAAAGTGGAATATTTCCTGAA GTTTCTTAACTCTCAGAAAGCTGGCAAAGAAAAAGATGGTACAAAAAGAAAATCTTTATCTGACAGTGAATCTGA TGACAGCAAATCAAAGAAGAAAAAGAGATGCTGCTGACAAACCAAGAGGATTTGCCAGAGGTCTTGATCCTGAAAG AATAATTGGTGCCACAGACAGCAGTGGAGAATTGATGTTTCTCATGAAATGGAAAGATTCAGATGAGGCAGACTT GGTGCTGGCGAAAGAGGCAAATATGAAGTGTCCTCAAATTGTAATTGCTTTTTATGAAGAGAGACTAACTTGGCA AGCTTTCTGTAGTTGCTTCCTTTATCAGAAAAGAACATTTGATACCATGGTATATCATTTCCTCTTCATTAAAGA ACAGCTTTTCTAAATGTTGGGGGAAATGTCCATAGTCATTACTCAGTCAAAACTTGTGTTCTCATGAGCCTAAGG GTAAATTTTTTTTTTTTTAAGCATTCACCCAAACAAAAAATCACAGGTAAACCCATGTTTCTGAGATGCCAT TATTCCAAGCAAAATAAGAGATAATCCCTTCAAGTTAAATTGAAAATTTTCCTGAAACCATACATTTCAAGTGAA ATAAGTAATTCTAGATAGGACAATTTAAATTGGATAATTTTAAAGTGTCTATAATTGCAGTGGTTTATTTGCAAA ATTCCTAAAAGGAAAAATTTTATCACTGCCATCACAGCAGGTTTCCTCATCCAGATGAGGAAACTAGACAAATGC TAGTGTGTTTTAACTAGCTAAACAAAACTAAGTTAAATGAACATTTAAAAGTTTCCCTAGCGGGCCATTCCTTAG CAAAATGTTGGAATCCCTGTTGCTACATTGACTAAAAGGTCATGATGAATGGAATATGTAAGACTTGGCTCATAG AAACCTAATCAGATGGTTAGAGGTGTTGGCAGTTTAGGACCTGCTGTCATAAATGTGTGAACAACCTTTTGTAAC CTAACCTATTGACCTGCATGTTTTTTCTTTACCCCAATTCATTACATGGAGGCTCAATCTTGAGTTTGCTTTACT GGTTCAGCAAAAGCCAGGAAGAACAACTTTGTAGTAATCAAAATGTTATCCAACTGTATATTGTTTACTTTATTG TAAATACTGGTGAACAGTGGTTAATAAATAGTTTTATATTCCTTTATGCAA

MASNKTTLQKMGKKQNGKSKKVEEAEPEEFVVEKVLDRRVVNGKVEYFLKWKGFTDADNTWEPEENLDCPELIEA FLNSQKAGKEKDGTKRKSLSDSESDDSKSKKKRDAADKPRGFARGLDPERIIGATDSSGELMFLMKWKDSDEADL VLAKEANMKCPQIVIAFYEERLTWHSCPEDEAQ

GACGGCAAATGGCGGACTTCGACACCTACGACGATCAGGCCTACAGCAGCTTCGGCAGCGGCAGAGGGTCCCGCG GCAGTGCTGGTGGCCATGGTTCCCGTAGCCAGAAGGAGTTGCCCACAGAGCCCCCCTACACAGCATACGTAGGAA ATCTACCTTTCAATACGGTTCGGGGCGACATAGATGCTATCTTTAAGGATCTCAGCATAAGGAGTGTACGGCTAG TCAGAGACAAAGACACAGATAAATTTAAAGGATTCTGCTATGTAGAATTCGATGAAGTGGATTCCCTTAAGGAAG CCTTGACATACGATGGTGCACTGTTGGGCGATCGGTCACTTCGTGTGGACATTGCAGAAGGCAGAAAACAAGATA AAGGTGGCTTTGGATTCAGAAAAGGTGGACCAGATGACAGAGGCTTCAGGGATGACTTCTTAGGGGGCAGGGGAG GTAGTCGCCCAGGCGACCGGCGAACAGGCCCCCCCATGGGCAGCCGCTTCGGAGATGGCCCTCCCCTCGGTGGAT CCAACATGGATTTCAGAGAACCCACAGAAGAGGAAAGCGCACAGAGACCACGACTCCAGCTTAAACCTCGAACAG TCGCGACGCCCTCAATCAAGTAGCCAATCCCAACTCTGCTATCTTCGGGGGTGCCAGGCCTAGAGAGGAAGTTG TTCAAAAGGAGCAAAAATGAGCCTGCGGTTGGGAGGGAATGGGGGGGTGGGGGGTTAGAGCAGGACCACAGCCTGG TGAGTCCCCGGGCAGCCGTCCTGCAGCCGCCACTCCTGCGCCTTGCCATTGGCCTCCTCACAGCGGAAACACAGCT TGTGCGTTTTTTTTTTTTCTTCCGCTGCTTCCCCATTTTCCTTCTGTCCTTTTTCTCCIGCTCCTTGTTTTCCCAG TTCCTTTGCTTTCTCTTTACTTTAGACACTGGCCCAACTCCAGGAGTTTCCTTTCATTCCCTCAGTGCTTCTCTT CTGACCTGCATGTTGAGTTCTGTATTGCTGGGGCTTCCAACAAAAACCAGAGTCACTGACAGAGGGAACTGCAGA GACCTTGTTGGTATTCAGCTGTGATGGATATAGAGAATCGGAGGCACCTTGTTTTCACAACTAGGATAAAAATAT CTGCAGGGTCCTTTCCATTCCTATTTAGAGGGAGTCCTGGCTCCATGACCCCCTCCCGAGTGGACTGTCCAAGCA GATAGGCTCACACGAGAAACAGTGAGGCTGAAAGGGGGGGCCATGGAAGAGCGGTAGGGAGTCCACGGAGAAGAT $\verb|CTCGCCTCTCTGGCCGGGTGCAGTGAACGGCCAGCGGGTTTCTTTTCTGCTGGGCCAAGGCGCTTTGGGGGTGGA|\\$ GGGGGTGGTGCTGCCCCCCATCCCTGTTGCCTGTGT GTTGTGTGGATCTGTTCCTAGTATAGGCAACATAATGAGATACTGTGCTTCCCACCTCCCCTTCAGTTCAGAGCC AAAATGGGTCTAGAATCTGGCACTTTACTCATTTCCTTTGATAAATTGTACTGTGCAGAGCTGTCAGGAACCTTC AGATAGCAGTAGAGGACTGCAGCTGCCTAGGTCTGCGGCCACATCTTGGGGACACACTGGATTGTTCCCATGTGC AGGGTTCAGCACTTACGTGGGAGTGCTAGGGGTTAGGCTTTTGAGCTTGAACGCCTGCGTGTGAACAGATGAAAA GAGGCCCTCGCCAGGTGATGGCAGGGCCAĠGGTGGCCTGGGGCACCCAGCGGAATGTGCTTAGTATTTGGTCACC TCCACCTGTCAGCTTCTCTGCTTCTGAGATAAGAACCATTTGTGTAACACCAACACTTAACTTCAGAAAGACATG CATTATGTGGTGTAATCAAACCCGAGGCTTTCAGATGACCTACTTACATCTTCAATGTGGATAAGATAAAGAACA AAACACATGCATCTAAACTGCTGGGCAATCCAGTTGACTTTTAAATGTAAGAATGGAATTCCAAACACTTAACAC ACGTAATATTT

MADFDTYDDQAYSSFGSGRGSRGSAGGHGSRSQKELPTEPPYTAYVGNLPFNTVRGDIDAIFKDLSIRSVRLVRD KDTDKFKGFCYVEFDEVDSLKEALTYDGALLGDRSLRVDIAEGRKQDKGGFGFRKGGPDDRGFRDDFLGGRGGSR PGDRRTGPPMGSRFGDGPPLGGSNMDFREPTEEESAQRPRLQLKPRTVATPLNQVANPNSAIFGGARPREEVVQK EQK

GTGCGCGCGCGCCCTTCTCCGTGGGCGAGCCAGCCAGTCCCGCTGCACACGCTCGCAGTCTGTGGGCCCTCCGGG AGGCGGCGGAGGTCACCGCGGGGAGAGGGGCGGCGCAGCATCGCAGCCTCCTTACGGCTCCTCGGAGCTGCCTC CGGTCTCCGGTACTGGAGCCGGCGGCTGCGGCCGGCAGCCTGCAGCGGTGTGTTCTAGGTCAGTGGC TTCAAAGACTCCAGTTGGATTCATTGGACTGGGCAACATGGGGAATCCAATGGCAAAAAATCTCATGAAACATGG CTATCCACTTATTATTATGATGTGTTCCCTGATGCCTGCAAAGAGTTTCAAGATGCAGGTGAACAGGTAGTATC TTCCCCAGCAGATGTTGCTGAAAAAGCTGACAGAATTATTACAATGCTGCCCACCAGTATCAATGCAATAGAAGC TTATTCCGGAGCAAATGGGATTCTAAAAAAAGTGAAGAAGGGCTCATTATTAATAGATTCCAGCACTATTGATCC TGCAGTTTCAAAAGAATTGGCCAAAGAAGTTGAGAAAATGGGAGCAGTTTTCATGGATGCCCCTGTTTCTGGTGG TGTAGGAGCTGCACGATCTGGGAACCTCACGTTTATGGTGGGAGGAGTTGAAGATGAATTTGCTGCTGCCCAAGA GTTGCTGGGGTGCATGGGCTCCAACGTGGTGTACTGTGGAGCTGTTGGGACTGGGCAGGCGGCAAAGATCTGCAA ${\tt CAACATGCTGTTAGCTATTAGTATGGAACTGCTGAAGCTATGAATCTTGGAATCAGGTTAGGGCTTGACCC}$ AAAACTACTGGCTAAAATCCTAAATATGAGCTCAGGACGGTGTTGGTCAAGTGACACTTATAATCCTGTACCTGG ${\tt AGTGATGGCGTTCCCTCGGCTAATAACTATCAGGGTGGATTTGGAACAACACTCATGGCTAAGGATCTGGG}$ ATTGGCACAAGACTCTGCTACCAGCACAAAGAGCCCCAATCCTTCTTGGCAGTCTGGCCCATCAGATCTACAGGAT ${\tt GATGTGTGCAAAGGGCTACTCAAAGAAAGACTTCTCATCCGTGTTCCAGTTCCTACGAGAGGAGGAGGAGCCTTC}{\tt TG}$ **AGTGTGCCCTTTGGCCACGGACACTGTTGGGAACCAAACTCTGTCTTGGAGCCTCCTTTTAGCTCACTCCACAAG** TAAATGGATTTAATCAAAGGTCACCTATCTGCTTTTGATTGTCTAGGTCACAGTAATCCCTAGGATTTTTCACCG TAGCTTAATTGACCTTTTTACAAAGTTTGATCCCCAAGCATCCTCAACTAAATCATTGAATACTTCAATCAGGAT GAATTGGTGTGAAGAGAGAAGTTAGAGAAGGGAAATGCAGTGAATTACTATCTGTGTCCATCAGGAAGTTTGTCC TGTTAACCAAATGGTTACTGCACTACCAGGGTTACTGGTTTATTTTCCAGGGAGCTGATAAAGCAGGAGAACTGT TGCTGCATGTTTTCTATTTGGACTCCGTCACAATATGGTAGGATATCCCTCACCAACTCCCGACACTCAGCAGAC ATTTCAGAGCCAATGATGATATTTGCTTTAGATAATTATTATTATTATAAATATAGCCATATTATTTTGAATT CAAATAAATTTCTATACTGGT

MAASIRLIGAASGIRYWSRRIRPAAGSFAAVCSRSVASKTPVGFIGLGNMGNPMAKNLMKHGYPLIIYDVFPDAC KEFQDAGEQVVSSPADVAEKADRIITMLPTSINAIEAYSGANGILKKVKKGSLLIDSSTIDPAVSKELAKEVEKM GAVFMDAPVSGGVGAARSGNLTFMVGGVEDEFAAAQELLGCMGSNVVYCGAVGTGQAAKICNNMLLAISMIGTAE AMNLGIRLGLDPKLLAKILNMSSGRCWSSDTYNPVPGVMDGVPSANNYQGGFGTTLMAKDLGLAQDSATSTKSPI LLGSLAHQIYRMMCAKGYSKKDFSSVFQFLREEETF

GACGCAAGGCCTACTGTCGGCTGGGAGGGGAGGTGTAGCCGGTCTTTGGGGGTAGGCGGTAGTGGCGGAAGAGGT TCGGCGGCTGATGGCGGATCAGGATCGGAAGCCTGCGTAACTTTCTCCCTTGATCCGGGAGTCTTTCCACTGGAT TCACAATGACATCCTTTCAAGAAGTCCCATTGCAGACTTCCAACTTTGCCCATGTCATCTTTCAAAATGTGGCCA AGAGTTACCTTCCTAATGCACACCTGGAATGTCATTACACCCTTAACTCCATATATTCATCCACATCCAAAAGATT GGGTTGGTATATTCAAGGTTGGATGGAGTACTGCTCGTGATTATTACACGTTTTTATGGTCCCCTATGCCTGAAC ATTATGTGGAAGGATCAACAGTCAATTGTGTACTAGCATTCCAAGGATATTACCTTCCAAATGATGATGAGGAGAAT $\tt TTTATCAGTTCTGTTACGTTACCCATAAGGGTGAAATTCGTGGAGCAAGTACACCTTTCCAGTTTCGAGCTTCTT$ CTCCAGTTGAAGAGCTGCTTACTATGGAAGATGAAGGAAATTCTGACATGTTAGTGGTGACCACAAAAGCAGGCC TTCTTGAGTTGAAAATTGAGAAAACCATGAAAGAAAAAGAAGAACTGTTAAAGTTAATTGCCGTTCTGGAAAAAG TGCAAGCAGAACAAAAGGGTCTTACTGAAGTAACACAAAGCTTAAAAATGGAAAATGAAGAGTTTAAGAAGAGGT TCAGTGATGCTACATCCAAAGCCCATCAGCTTGAGGAAGATATTGTGTCAGTAACACATAAAGCAATTGAAAAAG AAACCGAATTAGACAGTTTAAAGGACAAACTCAAGAAGGCACAACATGAAAGAGAACAACTTGAATGTCAGTTGA AGACAGAGAAGGATGAAAAGGAACTTTATAAGGTACATTTGAAGAATACAGAAATAGAAAATACCAAGCTTATGT CAGAGGTCCAGACTTTAAAAAATTTAGATGGGAACAAAGAAGCGTGATTACTCATTTCAAAGAAGAGATTGGCA GGCTGCAGTTATGTTTGGCTGAAAAGGAAAATCTGCAAAGAACTTTCCTGCTTACAACCTCAAGTAAAGAAGATA CTTGTTTTTTAAAGGAGCAACTTCGTAAAGCAGAGGAACAGGTTCAGGCAACTCGGCAAGAAGTTGTCTTTCTGG CTAAAGAACTCAGTGATGCTGTCAACGTACGAGACAGAACGATGGCAGACCTGCATACTGCACGCTTGGAAAACG AGAAAGTGAAAAAGCAGTTAGCTGATGCAGTGGCAGAACTTAAACTAAATGCTATGAAAAAAAGATCAGGACAAGA CTGATACACTGGAACACGAACTAAGAAGAGAAGTTGAAGATCTGAAACTCCGTCTTCAGATGGCTGCAGACCATT ATAATGTCTTCACAAAGAAAACGGGGAATCAGCAGAAAGTGAATGATGCTTCAGTAAACACAGACCCAGCCACTT CTGCCTCTACTGTAGATGTAAAGCCATCACCTTCTGCAGCAGAGGCAGATTTTGACATAGTAACAAAGGGGCAAG TCTGTGAAATGACCAAAGAAATTGCTGACAAAACAGAAAAGTATAATAAATGTAAACAACTCTTGCAGGATGAGA AAGCAAAATGCAATAAATATGCTGATGAACTTGCAAAAATGGAGCTGAAATGGAAAGAACAAGTGAAAATTGCTG AAAATGTAAAACTTGAACTAGCTGAAGTACAGGACAATTATAAAGAACTTAAAAGGAGTCTAGAAAATCCAGCAG ${\tt AAAGGAAAATGGAAGGTCAGAATTCCCAGAGTCCTCAATGTTTCAAAACATGCTCAGAGCAAAATGGTTATGTTC}$ TCACATTGTCAAATGCACAACCAGTTCTGCAATATGGTAATCCTTATGCATCTCAGGAAACAAGAGATGGAGCAG ATGGTGCTTTTTACCCAGATGAAATACAAAGGCCACCTGTCAGAGTCCCCTCTTGGGGACTGGAAGACAATGTTG TCTGCAGCCAGCCTGCTCGAAACTTTAGTCGGCCTGATGGCTTAGAGGACTCTGAGGATAGCAAAGAAGATGAGA ATGTGCCTACTGCTCCTGATCCTCCAAGTCAACATTTACGTGGGCATGGGACAGGCTTTTGCTTTGATTCCAGCT TTGATGTTCACAAGAAGTGTCCCCTCTGTGAGTTAATGTTTCCTCCTAACTATGATCAGAGCAAATTTGAAGAAC ATGTTGAAAGTCACTGGAAGGTGTGCCCGATGTGCAGCGAGCAGTTCCCTCCTGACTATGACCAGCAGGTGTTTG AAAGGCATGTGCAGACCCATTTTGATCAGAATGTTCTAAATTTTGACTAGTTACTTTTATTATTATGAGTTAATATA GTTTAGCAGTAAAAAAAAAAAAAAACCACACCTAAAATAGACCACTGAGGAGACCATAGAGCGGATGCTTTCA TGCACCCTTTACTGCACTTTCTGACCAGGAGCTACTTTGAGTTTGGTGTTACTAGGATCAGGGTCAGTCTTTGGC TTCCCTAGTTTGCAGAACTGTCTGAATAAAGGATACAAGGATTATTTCAATGTTACTGCACTGAAAAAACGTGTAT ATATTATGTAATAAAAAGCATTTGTCATAAC

2417/6881 FIGURE 2225

2418/6881 FIGURE 2226A

CCCCGACTAGCCCGACAGTCCCCGACTAGCCCGACAGCCCCAGCAGGATCTGCATCGTCATCGAGCCGGCCCAGC TTCTGAAGGGAGATGTCATGGTGAAATGCTACCACAAGAAATACCGCTCGGCCACCCGTGACGTCATTTTCCGCC ATGACCGTTTTCCTGACTATGGGAAGGTTGAATTAGTCTTCTCTGCCACGCCTGAGAAGATTCAAGGGTCCGAAC ACTTGTACAACGACCACGGTGTGATTGTGGACTACAACACACAGACCCACTGATACGCTGGGACTCGTACGAGA ACCTCAGTGCAGATGGAGAAGTGCTACACACGCAGGGCCCTGTCGATGGCAGCCTTTACGCGAAGGTGAGGAAGA AAAGCTCCTCGGATCCTGGCATCCCAGGTGGCCCCCAGGCAATCCCGGCCACCAACAGCCCAGACCACAGTGACC ACACCTTGTCTGTCAGCAGTGACTCCGGCCACTCTACAGCCTCTGCCAGGACGGATAAGACGGAAGAGCGCCTGG CCCCAGGAACCAGGAGGGCCTGAGTGCCCAGGAGAAGGCAGAGTTGGACCAGCTGCTCAGTGGCTTTGGCCTGG AAGATCCTGGAAGCTCCCTCAAGGAAATGACTGATGCTCGAAGCAAGTACAGTGGGACCCGCCACGTGGTGCCAG ACGACCTGCACAGTGTGGACAGCCTTGGGACCCTGTCCTCCTCGGAAGGGCCTCAGTCGGCCCACCTGGGTCCCT TCACCTGCCACAAGAGCCAGAACTCACTCCTATCTGACGGTTTTGGCAGCAACGTTGGTGAAGATCCGCAGG GCACCCTCGTTCCGGACCTGGGCCTTGGCATGGACGGCCCCTATGAGCGGGAGCGGACTTTTGGGAGTCGAGAGC CCAAGCAGCCCCAGCCCTGCTGAGAAAGCCCTCAGTGTCCGCCCAGATGCAGGCCTATGGGCAGAGCAGCTACT CCACACAGACCTGGGTGCGCCAGCAGATGGTTGTAGCTCACCAGTATAGCTTCGCCCCAGATGGGGAGGCCC GGCTGGTGAGCCGCTGCCCTGCAGACAATCCTGGCCTCGTCCAGGCCCAGGCCCAGAGTGCCACTCACCCCCACCC CTCCCAGCAAAGCGTTCAAACCCAGGTTTCCAGGAGACCAGGTTGTGAATGGAGCCGGCCCAGAGCTGAGCACAG GCCCTCCCCAGGCTCGCCCACCCTGGACATCGACCAGTCCATCGAGCAGCTCAACAGGCTGATCCTGGAGCTGG ATCCCACCTTCGAGCCCATCCCTACCCACATGAACGCCCTCGGTAGCCAGGCCAATGGCTCTGTGTCTCCAGACA GCGTGGGAGGTGGGCTCCGGGCAAGCAGCAGGCTGCCTGACACAGGAGGGCCCCAGCAGGGCCACCGGGCGGC AAGGCTCCTCTGCTGAACAGCCCCTGGGCGGGAGACTCAGGAAGCTGAGCCTGGGGCAGTACGACAACGATGCTG GGGGGCAGCTGCCCTTCTCCAAATGTGCATGGGGAAAGGCTGGTGTGGACTATGCCCCAAACCTGCCGCCATTCC CCTCACCAGCGGACGTCAAAGAGACGATGACCCCTGGCTATCCCCAGGACCTCGATATTATCGATGGCAGAATTT TAAGTAGCAAGGAGTCCATGTGTTCAACTCCAGCATTTCCTGTGTCTCCAGAGACACCGTATGTGAAAACAGCGC CACGAAGCTGCCCTGAGACGCTCACTCACGCTGTGGGGATGTCAGAGAGCCCCATCGGACCCAAATCCACGATGC TCCGGGCTGATGCGTCCTCGACGCCCTCCTTTCAGCAGGCTTTTGCTTCTTCCTGCACCATTTCCAGCAACGGCC TGTCCTGCTTCCCGCCGTCAGAGCTCCAGGCTCCTTTCCACAGCCATGAGCTGTCCCTAGCAGAGCCACCGGACT CCCTGGCGCCTCCCAGCAGCCAGGCCTTCCTGGGCTTCGGCACCGCCCCAGTGGGAAGTGGCCTTCCGCCCGAGG AGGACCTGGGGGCCTTGCTGGCCAATTCTCATGGAGCGTCACCGACCCCCAGCATCCCGCTGACAGCGACAGGGG CTGCCGACAATGGCTTCCTGTCCCACAACTTTCTCACGGTGGCGCCTGGACACAGCCACCACCACAGTCCAGGCC CTTTGGGCTCAGTCTCCCCCCCCCAGTGGCTTCTCCAGCCCGCACAGCGGGAGCACCATCAGTATCCCCTTCC CAAATGTCCTTCCCGACTTTTCCAAGGCTTCAGAAGCGGCCTCACCTCTGCCAGATAGTCCAGGTGATAAACTTG TGATCGTGAAATTTGTTCAAGACACTTCCAAGTTCTGGTACAAGGCGGATATTTCAAGAGAACAAGCCATCGCCA TGAAGGTGGCCACGCCCCACCTTCAGTCCTGCAGCTGAACAAGAAAGCTGGAGATTTGGCCAATGAACTCGTCC GGCACTTTTTGATCGAGTGTACCCCGAAGGGAGTGCGGTTGAAAGGGTGCTCGAATGAACCATATTTCGGGAGCC CATTGGAGGAAATAGCAGAAAGTTCTCCCCAGACGGCAGCCAATTCAGCAGCTGAGCTGTTGAAGCAGGGGGCAG CCTGCAACGTGTGGTACTTGAACTCTGTGGAGATGGAGTCCCTCACCGGCCACCAGGCGATCCAGAAGGCCCTGA GCATCACCCTGGTCCAGGAGCCTCCACCTGTGTCCACAGTTGTGCACTTCAAGGTGTCAGCCCAGGGCATCACCC TGACAGACAATCAGAGGAAGCTCTTCTTCCGGAGGCATTACCCCGTGAACAGTGTGATTTTCTGTGCCTTGGACC CACAAGACAGGAAGTGGATCAAAGATGGCCCTTCCTCAAAAGTCTTTGGATTTGTGGCCCGGAAGCAGGGCAGTG

2419/6881 FIGURE 2226B

CCACGGATAATGTGTGCCACCTGTTTGCAGAGCATGACCCTGAGCAGCCTGCCAGTGCCATTGTCAACTTCGTAT ${\tt CAAAGGTCATGATTGGTTCCCCAAAGAAGGTC} {\tt TGA} {\tt GAACTCCCCTCCCTGGACCCACCGATGCCTCTCGAA}$ GCCCTGGAGACAGCCGTTGGGTGAGGGTGGGGCCCCCACTTTTTACCAAACTAGTAAACCTGACATTCCAGGCCC ATGAGGGGAAAGAGATCTTCCAGCTCTGCAAAAACAAGAACAACAACATCACCGTGAATTGGCCTTTCCTGAA AGTGACTTATCTGACACATCTCTGTAGCCACATGCTTTTTGGGTAGAAGAAGCTGGGCATGGGTGCACCCCACCC CCTAGGGTCCCCATGGGAAAGGGACATGCAAGGAAACAGCACAGAACACGAGGTGGTCCCCATGTCCCTGGCACA CTAGCATTCCGGGGGATGAGGAATCCCCAGCCCTTGAGGCAGAGGTGCCGAGTGACTGCCATGCTTCGCCCGTCC GCATGGGCGCTTCTGTCCAGCTGCACCCGAGGCCGGGGGTTTCCCTCACCTCGGTCTTCCCAAGATGGAGATGCT AACGAAACTGAGAAGGGGGCGTATGTTTGACGAAGGTTTGTGCAAGTCAGGCCCTTCTGGAACACAGCAGGGCCT ACAACGAGGGCCTTTGCGATGGGCTGTGAGGATGGGGGTGGTGGGAAGAATTGGCCACGTTAGAGACCCCATGC CACCCCACCATGGTGAGTGCTCTGTGCCTCCTGCTCACCTGTGGTGAGCTGGGCGAGCTGGGCGAGCTGGGCGAG CTGGGCTGGGGAGAGCCTGTGAGGACCGAGAGGAGAAATGAGAAGGAACAAAAATATTATTTCTATGTAATT TATATTTTACTTATGCCAAATTATTTATGATAATTTGCCATTGCTATACTGTACCAGTGTCAAATGCTGCAGCCT GCCAAGCTGTGATITTGTGAGGCTTGTCCCTATGTAGGATGCACCGCAGGCCCCTGGCCACTGAAAGAGTGTGCA GTGGACTGTGGGTCTCCCATATGCGGTGCCGCCCAAAGGTGGCTTTGCCTCAAGCAACCTACCCTGATGTTTTAC TCATTGGAATGTTTTTCCCCGATTGTGGATGACTTCTTTTCTGATGGAGAGAGTCCAGGAGGGATGGAAAACTCC TGGATTTAAGCTCAGCATCCCCCACATGGGCTTTTCGATCATCTTCAGGCCTGAAGCTGCACGACCTGAAGTTCG CATGTGTGAGCAGAAGGGAGGATGAGGAAAAAGAGAAGAAACCCCGGTACTGACAAGCTGTTTTTGAGTGCCACT GTTTGCCATCATCTAAGCCACTGAATCAAGTGTATTTCAGGCTTATTTCAACATTCCAATGCCCTGGTTTTCCTG CTTGAATCTGTTCGTGGTCAAAGGTTTGGGGGAATTTGTGACCCTGGAACATCCCCAGAGTGAAAGATGGAGCTG GGCCACATCAGAATAAGGCCTTGGCCCCATCCTCTCACAGCCTAGGTGCTCTGCAGGCATGCTGACTGTCCTGAT TGCGATCCAGCCCGAAATTCCCTCCTCTGCTTTCAAAAGTCAAATCCCCCATTCTTAGGCCACACTGGTGTCACA AGCTCCTGTCAGGGAGCTGGGGTTTGGGAATGTGCTTTGTGAACTCTGCTTTAAAGTGAGGGGCCGAGGAAAACT TATGCGTGTGTGAAAGCAGGTGGACCATTCCACTTTTTAGCTCCTATTGATGCACCAAACCAAGTGCCTCATTTC TGTGCCAAATGTTTGCCTTGGTCGTTGTGGACCTCCTTCTCTAACTTGCGGTGGCATGACTGTCAGGAGGTGCTG GCATTTTCAGCAGATCCTCATGTGTTGACCCTGATGTCTTTAGCAGAGGCCTCTAGCATCTCGGTTTTTCATCCA CTGCAGGAATGTGGCCACAGGGAGCAGAGGTTTGTACTTTCCCCAAGAGGTCCTCATCCTGAGACGGTCTCTACC CATGTTTAACCCAAAGAGTGCAGGCCAGGTTCCTTATCCTTCTGATGAAGGATGAGAGAGCTCATTTAGAAGTCA GAGCAAACTAGGGTCTCAGTATTGAGAAACGCAGCCTGCCAGGGAATCACAGAGACATCGGGGGTGCCCGCGATGG CCCTCATGAAGCCATGCCTCGACGGCATTCAGGAAGCCCTGCAAACGTGCTTTTTGAACTCATTGGCCAGGTGTG ATTTTTACACAAGGTAAACGTGGTCAAGGGCATCGGGGAATTTGCTCCAAGCAGATAGCTCCCTCTGAGGAACCA TAAACAGAACAAGCTGTGTGTCATCACAGATTGTACTGTGGGCTCAGAAACCGTGAGAGAGCCCCCACCGTGGAC ACCGGCTCTAGGGCCACAGGAAAAGGAACGTTTCCAGGCATTTTGTCTCCAGGGCTCCCGCTGGACAGGCACGTA TCAGTAAAAGAACGTATTGTTGTATTCCTCCAGTGTTAAGCTATAGCCATGTTAAAAGTCACTGTGCATTTATTC TCAGCATCAAATACCTTGTAACGTCTTCTCTGCCTTGTTAGTGCATATTTTTACTTTTCTGATACTGTAAAGAAT ATATCCAGTATGTAAATGAATGTTCTATAAATCTTTTGTATAGTCATTTTCTCTGCTCCTTAAATATCATCTCTA ΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑ

 ${\tt MVKCYHKKYRSATRDVIFRLQFHTGAVQGYGLVFGKEDLDNASKDDRFPDYGKVELVFSATPEKIQGSEHLYNDH}$ GVIVDYNTTDPLIRWDSYENLSADGEVLHTQGPVDGSLYAKVRKKSSSDPGIPGGPQAIPATNSPDHSDHTLSVS SDSGHSTASARTDKTEERLAPGTRRGLSAQEKAELDQLLSGFGLEDPGSSLKEMTDARSKYSGTRHVVPAQVHVN ${\tt GDAALKDRETDILDDEMPHDLHSVDSLGTLSSSEGPQSAHLGPFTCHKSSQNSLLSDGFGSNVGEDPQGTLVPD}$ LGLGMDGPYERERTFGSREPKOPOPLLRKPSVSAQMQAYGOSSYSTOTWVRQQOMVVAHQYSFAPDGEARLVSRC PADNPGLVQAQPRVPLTPTRGTSSRVAVQRGVGSGPHPPDTQQPSPSKAFKPRFPGDQVVNGAGPELSTGPSPGS PTLDIDQSIEQLNRLILELDPTFEPIPTHMNALGSQANGSVSPDSVGGGLRASSRLPDTGEGPSRATGRQGSSAE QPLGGRLRKLSLGQYDNDAGGQLPFSKCAWGKAGVDYAPNLPPFPSPADVKETMTPGYPQDLDIIDGRILSSKES MCSTPAFPVSPETPYVKTALRHPPFSPPEPPLSSPASQHKGGREPRSCPETLTHAVGMSESPIGPKSTMLRADAS STPSFQQAFASSCTISSNGPGQRRESSSSAERQWVESSPKPMVSLLGSGRPTGSPLSAEFSGTRKDSPVLSCFPP SELQAPFHSHELSLAEPPDSLAPPSSQAFLGFGTAPVGSGLPPEEDLGALLANSHGASPTPSIPLTATGAADNGF LSHNFLTVAPGHSSHHSPGLQGQGVTLPGQPPLPEKKRASEGDRSLGSVSPSSSGFSSPHSGSTISIPFPNVLPD FSKASEAASPLPDSPGDKLVIVKFVQDTSKFWYKADISREQAIAMLKDKEPGSFIVRDSHSFRGAYGLAMKVATP PPSVLQLNKKAGDLANELVRHFLIECTPKGVRLKGCSNEPYFGSLTALVCQHSITPLALPCKLLIPERDPLEEIA ESSPQTAANSAAELLKQGAACNVWYLNSVEMESLTGHQAIOKALSITLVQEPPPVSTVVHFKVSAQGITLTDNQR KLFFRRHYPVNSVIFCALDPQDRKWIKDGPSSKVFGFVARKQGSATDNVCHLFAEHDPEQPASAIVNFVSKVMIG SPKKV

GGCACGAGGCACAGCTTCGCGCCGTGTACTGTCGCCCCATCCCTGCGCGCCCCAGCCTGCCAAGCAGCGTGCCCCG GCACTGGCCCAGTGCGCGCCTCCGCCGCGTGTGCGCGAGCTGGTGCGCGAGCCGGGCTGCGGCTGCTGCCTG ACGTGCGCACTGAGCGAGGGCCAGCCGTGCGGCATCTACACCGAGCGCTGTGGCTCCGGCCTTCGCTGCCAGCCG TCGCCCGACGAGGCGCGACCGCTGCAGGCGCTGCTGGACGCCGCGGGCTCTGCGTCAACGCTAGTGCCGTCAGC CGCCTGCGCGCCTACCTGCCAGCGCCGCCAGCTCCAGGAAATGCTAGTGAGTCGGAGGAAGACCGCAGCGCC GGCAGTGTGGAGAGCCCGTCCGTCTCCAGCACGCACCGGGTGTCTGATCCCAAGTTCCACCCCCTCCATTCAAAG ATAATCATCAAGAAAGGGCATGCTAAAGACAGCCAGCGCTACAAAGTTGACTACGAGTCTCAGAGCACAGAT ACCCAGAACTTCTCCTCCGAGTCCAAGCGGGAGACAGAATATGGTCCCTGCCGTAGAGAAATGGAAGACACACTG AATCACCTGAAGTTCCTCAATGTGCTGAGTCCCAGGGGTGTACACATTCCCAACTGTGACAAGAAGGGATTTTAT AAGAAAAGCAGTGTCGCCCTTCCAAAGGCAGGAAGCGGGGCTTCTGCTGGTGTGTGGATAAGTATGGGCAGCCT CTCCCAGGCTACACCACCAAGGGGAAGGAGGACGTGCACTGCTACAGCATGCAGAGCAAGTAGACGCCTGCCGCA AGGTTAATGTGGAGCTCAAATATGCCTTATTTTGCACAAAAGACTGCCAAGGACATGACCAGCAGCTGGCTACAG TATGGTTTCTTTGAATGGTAAACTTGAGCATCTTTTCACTTTCCAGTAGTCAGCAAAGAGCAGTTTGAATTTTCT TGTCGCTTCCTATCAAAATATTCAGAGACTCGAGCACAGCACCCAGACTTCATGCGCCCGTGGAATGCTCACCAC ATGTTGGTCGAAGCGCCGACCACTGACTTTGTGACTTAGGCGGCTGTGTTGCCTATGTAGAGAACACGCTTCAC CCCCACTCCCCGTACAGTGCGCACAGGCTTTATCGAGAATAGGAAAACCTTTAAACCCCGGTCATCCGGACATCC CAACGCATGCTCCTGGAGCTCACAGCCTTCTGTGGTGTCATTTCTGAAACAAGGGCGTGGATCCCTCAACCAAGA AGAATGTTTATGTCTTCAAGTGACCTGTACTGCTTGGGGACTATTGGAGAAAATAAGGTGGAGTCCTACTTGTTT AAAAAATATGTATCTAAGAATGTTCTAGGGCACTCTGGGAACCTATAAAGGCAGGTATTTCGGGCCCTCCTCTTC AGGAATCTTCCTGAAGACATGGCCCAGTCGAAGGCCCAGGATGGCTTTTGCTGCGGCCCCGTGGGGTAGGAGGGA CAGAGAGACAGGGAGAGTCAGCCTCCACATTCAGAGGCATCACAAGTAATGTCACAATTCTTCGGATGACTGCAG AAAATAGTGTTTTGTAGTTCAACAACTCAAGACGAAGCTTATTTCTGAGGATAAGCTCTTTAAAGGCAAAGCTTT TCTCATGCTTTTCTTTATAATTCACACATATATGCAGAGAAGATATGTTCTTGTTAACATTGTATACAACATAGC CCCAAATATAGTAAGATCTATACTAGATAATCCTAGATGAAATGTTAGAGATGCTATTTGATACAACTGTGGCCA TGACTGAGGAAAGGAGCTCACGCCCAGAGACTGGGCTGCTCTCCCGGAGGCCAAACCCAAGAAGGTCTGGCAAAG TCAGGCTCAGGGAGACTCTGCCCTGCTGCAGACCTCGGTGTGGACACACGCTGCATAGAGCTCTCCTTGAAAACA GAGGGGTCTCAAGACATTCTGCCTACCTATTAGCTTTTCTTTATTTTTTTAACTTTTTGGGGGGGAAAAGTATTTT ΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑ

FIGURE 2229

MQRARPTLWAAALTLLVLLRGPPVARAGASSGGLGPVVRCEPCDARALAQCAPPPAVCAELVREPGCGCCLTCAL
SEGQPCGIYTERCGSGLRCQPSPDEARPLQALLDGRGLCVNASAVSRLRAYLLPAPPAPGNASESEEDRSAGSVE
SPSVSSTHRVSDPKFHPLHSKIIIIKKGHAKDSQRYKVDYESQSTDTQNFSSESKRETEYGPCRREMEDTLNHLK
FLNVLSPRGVHIPNCDKKGFYKKKQCRPSKGRKRGFCWCVDKYGQPLPGYTTKGKEDVHCYSMQSK

FIGURE 2230A

GCGGGTGTTCGCCTACGTCACTGGGGCGCTACAGTACCTGGAGCTGGGCAGTCTTCTCATCAGAGTGGGGACTAA TAACAGTGACCTCCCCGCCAGGTCCTGTGTTGCCGGCTGAAGAAGGATGATTATTCCCCACCTTCTGAGA GACAAAGACCAACGAGCCACCAGCCACCAGTCCCAGAACCCGCCAATGCTGGGGAACGGAAAATGAGGGAGTT CAACTCTGGCCCTCACAATCCAGTGGAGGAGACGAAACTCATCTGCCTCTGTCCCTCTGGGCACGCTTCATGCCA GGTGCATCTGTGGACAGGGGCCATGCTCCTGGGCTTCCAAAGTTGGAGAAAGCTGCCAGGCTCAGAGCCACCTAA GCTGAAGATTCCCTTGAGAACAAGTACTGTCCTGTGGTTTCATGGCCTTTCTTCCATTTGTGGTTCTTGTGAAGT AGTAAATCCCACTCATCACCCATAGTCCAGGCATGGGGACCTCAACACCCTGAGCCCCAGACATCACCTTTCAT CTTGCCCTGTCATTTAGGATGGAGTTCAGTGGTCCAATCATGGCTCATTGTAGCCTCAAACTCCCAGGCTCAAGC AATCCTACCATGTCAGCCTTCCCAGTAGCTGGGACTACAGCTGGATCTACCATGAAAGACTTCTGAATCCAGGAA GAGAGACTGACTGGGCAACATGTTATTCAGGGTCTCCCTCTCTTGTCCAAGGCTGGAGTGTAGTAGTGCTATCAC AGCTGACTGCAGCCTCAACCTTCCAGGCTGAAGCGATCCTCCCATCTCAACCTCCCACGTGGCTGAGACTATAGG TGCTTGCCACTATGCCCAACTAATATTTGGAATTTTCCTATACGTGGATTCCAGAGGGGTGACAGCGAAACGTGA GACCATCCAGTTGCAGAAAAACAAGCTTAACACGCCCACTGATTCTACATTATGCCCCTACCTCCCGGCAGCCTC TCCAGGCCCAGAACTTTCTCCAGTCAGCCTCCACAGACCAAGCTCATGACTCACAATGGCCTATTTAGGCCCATA CCCTACCTCACGGCAGTCTCTGCAGATGAGGCTACTGCCTCACAACAGCCTCCACAGGCACAGCTCCACCGTTAC AATGGCCTCTTTAGACCCAGCTCCTGCCTCCCAGCCTTCTCCCAGGCCCTGAGCTTTCTCAAGTCGACCTCACC AGGCCCAGCTCATGCTTCTTGGCAGCCTCTCCAGGCCCAGCTCCTGCATCTTGGCAGCCTCTCCAGGCCCAGCCT CTGCCTCCTGTCAGCCTCTACAGTCCCAACATCTGCCTCACAGCAGATTCTTCAGGCCCAGTATCTGCCTCACTG TGGACCACCCAAGCCAAGCTCCCAACCTTTCAGCAGCTTCTACACACCCAGCTCCTGCCACCCAGTGGCCTCTTT AGGCCAAGCTCATGCCTCACAAGGGCCTTTCCAGGCCCAACTTTTGTCTCATGGCAACCTTCCCTGGCCACATTC CTGCCTGTCTCCCAGCAGCCTAGACAGGCCCAGGTCTTGCCTCACACTGGCCTGTCTACATCCAGCTCTTGCCTC ACGGTGGCCTCTCCAGGCCCAGCTCCTGTCCCAGGACGTCATCTCCAGGCCCAAAACTTCCTCAAGTCAGCCTCT CTAGTCCCAACTGCTGCCTCCTGGTGGCCTATGAAGGCCCAAAATCTCCTCAAGTTGACCTCTCCAGGCCCAGCT CCTGCCTCCTGTCAGCGTCTACAGGCCCAACCTCTGCCTCATGGGGGCCTTCTCCAGGCCCAGCTCTTCCTCTGGG CTGAGTCTACAGGCACAACTGCTGCCTCACAACAGCCTTTTTTGGCCCAGTTCCTGTCCAGCTCACAGCGACCAA GACTTGAGAACAGCCTCTGCAGGCCCTGCTCTTGCCTCCCAGGGGCTTCTCCAGGCCCCAGCTCTTGCCTCATGGC GGCTGCCCCAGGCCAAGTTTCTGCCTGCCTGCCAGCAGCCTCAACAGGCACAGCTCTTCCCTCACAGTGGCCCAT CTTCCTCAAATCAGCCTTTTGCCCAACTTCTGTCTACTGTCGGACTCTACAGGCCAGCCTCTGCCTCACAGTGGA CCCTCCAGACCCAGATGGTGTCTCACTGTGGCATCCTCAGGCGAAGCTCCTGCCTTTCAGCAGCCTCTACGGGCC CAGCTCCTGCCTTGCAATGGCCTCTTTAGGCCAAGCTCATGCCCCACGGCGACTTTTCCAGGCACAGCTTTTGCC TTTTGCAGCCTGTCCAGGCCCAGAATGTCCTTAACTCGGCGTCTCCAGGACGAGCTCATCCTCCCAGTGCGTCTA CAGGCCCGTCTCCTGCCTCACAACAACCTCCTTTGGTCCAACTCCTGCTGAGCTGCTTGGCAGCCTCTGTAGGCC ACAGAGTTCTTAAAGTAAAGCTTTCCAGGCCCACCTTCGGCCTCCCGGCAGCCTCAGCAATCAAACTATTCCCTC ACTGCGGCCACCGAAAGCCAAGTTTCTCCCTGCCTCACAGCATCCTCCGAAAACTGAGCATTTGCCTCACGGTGG CCTCCCCAGGCCACGAATCTGCCTGCCTCCCAGGCAGCTGCTGCCTCACAATGGTCTCTTTAGGCCCAGCTCTTG CTAAAAGACAGACTCTCCAGGCACAGCTCTTGCCTCCTGGCAGGCTCTGCAGGCCCAAATTCTCCAAAAGTTGGC CTCTCCTAACTCAGCTCCTGCCTCATGTCGGCCTACACAGGCCCAGACTCTTACCACACAGTAGACCCTCCAGGC CCACCACTTGCCTGAGCATAGCCTCCTAAGGCCAAGCTCCTGCCTTTCGGCAGCCTCTACAGGCCCAGCTCCTGC CTCGCAATTGCCTTTGTAGGCCAAGATCATGCCGCGAAGTGGCCTTTCCTAGCCTAACTTTTGCTTTTTGACGCA TACTCCGGTCCCAAAACTTCCTCCAGTCAGCCAGTCCAGGCCAAGCTCTTCCTCCCAAAGGCTTCTGCAGGCCAA AATCGTCCTGAAGTCACCCTCTGCAGGCCCAGCTCCTGCCTCCAAGTGCTGTGTAGGCCCAAGCTAATGCCTCACA GCACACTTTCCAGGCTGAGCATTTCCTTTTGTGCATCCTCTCCAAGCCCTGAACTTACTCCAGTTGGCCTCTCCA GACCAAGCTCTCCCAGTGGCCTCTACAGGCCAAAATTGTCCTCAAGTCAGCCTCTCCAGGGCCAACTCCTA GCTACCGGTGGCTTCTGCAGGCCAAAATCGACCTCAAGTCAGCCTCTTCACACCCCAGCTCTTGTCTGTAAGTGGC

FIGURE 2230B

TGCCTTTCGGCAACTTGTACGGGCCCAGCTCCTCCCTCACGGTGGCCTCTTTTCGCCCAACTCATGCCTCTTGCA ACCTGCCCAAGTGTCAGCTCCTGCCTCACACTGGCCTCTTGAGGCTCAGCCTCATGCCTCTCGTGGCCTCAACGGG $\tt CCCAGCCCTGCCTGTCGGCGGCCTCTACAGGCCCAGCCTCTACCTCACAGTGGGCTCTCCAGGCCCACCTCTTT$ $\tt CTCACCGTGGCCTCCTGGGGCCAATGCTCCCCGCTCTCGGGAGCCTCTGCGGGCCCAGCTCCTGCCTCCCAGTGGC$ $\tt CTGGACTTCCTCCAGTCGGCCTCTCCAGGCCCAGCTCTTCCTCCCGGCGGCCTCTGCAGGCCCAGACTGTTGTCAGGCCCAGGCCCAGACTGTTGTCAGGCCAGGCCCAGGCCAGGCCCAGC$ $\tt CAGGCCCAGCTCCGGCCGCCCGCCCCAGGTGCAAAAGTTCCTCGAGTCAGCCTCTCCAGGCCCAGCTCCAGGCCCCAGCTCCAGGCCCCAGCTCCAGGCCCCAGCTCCAGGCCCCAGCTCCAGCTCCAGGCCCCAGCTCCAGGCCCCAGCTCCAGCTCCAGGCCCCAGCTCCAGCTCCAGCCCCAGCTCCAGCCCAGCTCCAGCTCCAGGCCCCAGCTCAGCTCCAGCTC$ $\tt CTCCTGCCTCCCAGCGGCCTCTTTCGGCCCAGCCCAGCTCATGCCTCCCGGCTGCGTCTTAGGCCCGACTCCGG$ $\tt CCTCCCAACAACCTCTTTGGACTCAGCCTCTGCCTCTCGAAGGCCTGCACGGGCCCAGCCTCAGCCTCACAGCGG$ ACTCTCCACGCCCAGCTAGCTCTCGCCTCACTGCGGCCTCCCCAGTCGAAAGCTCCTGCCTTTCGGCCGCTTTGG ${\tt CAGGCCCAGCTCCTGCCAGTGGCCTCTTTAGGCCCAGCTCATTCCTCACAACGGCCTTTCCAGGCCCCGTT}$ TTTCCCTTCCGGCAGCCTTTTGGCCTCTAATTTGTTTATCTTTTGTGTATAAATCCCAAAATATGGAATTTTGGA ATATTGCTACCATT

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MLLPPGSLSRPRTFSSQPLQTKLMTHNGLFRPIPYLTAVSADEPTASQQPPQAQLHRYNGLFRPSSCLPAFSPGP ELSQVDLTRPSSCFFAASPGPAPASWWPLQAQPLPPVGLYSPNICLTADSSGPASASLWTPQAKLPTFQQLLHTQ LLPPSGLSRPSSCFTRAFAGPTFVSWQPSLARFLLVSQQPRQAQVLPHTGLSTSSSCLTLASPGPTPVPGRHLRA QNLLKSDSLVPTAAFWWPMKAQNLLKLTSPGPAPASCQHLQAQPLPHGVFSRPTSSSWLGLQAQLLPHNSLFWPS SCPAHGGQCRPKTSSSQTLQAHLLLPGGMNRPSFDLRTASAGPALASQGLFPGPALASWQLPEAKFLLACQQPQQ AQLLPHSGPFSPNS

2426/6881 FIGURE 2232A

GGGAAGCGCGCCGCCACCTCATGGTTCCGGGGACAGTTAGGGCGGCGGATGGAGGTCAGCGGTGGTGCTCGCTG CGGTTTGGAATCACTTGCTAGGAGTCTTGTCTCTCTGCCACCCAGGACATC<u>ATG</u>GCAGCTCACCTGGTAAAGCGA TGCACGTGCCTCCTGAGAGAGCTGCTCGTCAGGCCCCTGCCATGGCTCCAGTTGGCCGACTGAGACTTGCCTGG GTAGCCCATAAGACTCTGACTTCCTCAGCCACCTCACCCATTTCCCACCTCCCAGGTTCCTTGATGGAGCCGGTG GAGAAGGAACGAGCATCTACTCCCTACATAGAGAAGCAGGTGGACCACCTCATCAAGAAGGCCACAAGGCCAGAG GAGCTCCTGGAGCTACTTGGTGGCAGTCACGACTTGGACAGCAATCAAGCAGCAATGGTACTTATCCGGCTCTCT CTCAACAGTCAGATTGCCTCGGTCTGGCATGGTACCCTCTCGAAGCTGCTGGGAAGCCTGTATGCTCTGGGCATC CCCAAGGCCTCCAAGGAGCTGCAGTCGGTGGAGCAGGAGGTCCGCTGGCGCATGCGGAAGCTCAAGTACAAGCAC CTGGCCTTCCTGGCAGAGTCCTGTGCCACCCTCTCACAGGAGCAGCACTCGCAGGAGCTGCTGAGCTGCTC ACACACCTGGAAAGGCGTTGGACAGAAATTGAAGATTCCCACACATTAGTGACCGTCATGATGAAGGTGGGACAC CTCTCGGAGCCACTAATGAACCGCCTGGAAGACAAGCACGTCCTGAACAGAGCGCAGGACATCACCCTGCCCCAC CTGCAGCAGGCACGGGAAGCAGAGCTGCAAGCCGTCCTCCACCCTGAATTTCACATCCAATTTCTAGGGGGCAAG TCTCAGAAGGATCAGAACACCTTCCAGAAGCTGCTCCACATCAACGCCACTGCCCTGCTGGAGTACCCCGAGTAC TCGGGTCCCCTTCTGCCTGCCTCGGCTGTGGCCCCTGGGCCCTCAGCCCTTGACAGGAAGGTGACCCCCCTGCAA AAGGAGCTGCAGGAGACGCTGAAGGGGCTGCTGGGGAGCGCCGACAAGGGCAGCCTCGAGGTGGCCACGCAGTAT GGCTGGGTGCTGGATGCTGAGGTGCTGCTGGACAGTGACGGCGAGTTTCTGCCCGTAAGGGACTTTGTGGCACCT CACCTTGCCCAGCCAACTGGGAGCCAGTCACCACCTCCAGGGTCTAAGAGGCTAGCGTTCTTGCGGTGGGAGTTC CCCAACTTCAACAGCCGAAGUAAGGACTTGCTGGGTCGCTTTGTTCTGGCCCGGCGACACATAGTGGCTGCAGGC TTCCTGATAGTGGACGTCCCATTCTATGAGTGGCTGGAACTCAAGTCTGAATGGCAGAAAGGCGCCTACCTCAAG GACAAGATGCGCAAAGCGGTGGCTGAGGAGCTGGCCAAG<mark>TGA</mark>CTTGTGCCAGCAGCATGGACTGCGTGCCTCTCC GCCGGAGGTCTAGCTGTGGGCGGCCAAGAAGGGTCACCCTTGAGGACAAACCTCTGTGCAGGACCTTGGCCAGAG TGGGGAGGGTGGCCACCCCTGAGGGACAGAACGTCCTCTTGTGTATAAAACCTTTAATTTTGGTGTTGGA GGTTCTCCAGTCTGCCCTGTGCACTCCCCCGCCACGCCCAAGAGGGCTGCTTTAGGGACAGACCTGGGTT GTTACCTGCCTGTCTCCCCAGCTTCTTCCCTCCATGAGTGCTTATTCACATATGCCGGCCTCTTGCGTAGGGGT CTGTATCAGCCCCAGCAGGCAGGTGGAGTCCTAGAATTCTGAACCTCCAGAGCAGGAGGAGCTTCCCAGGGAAGCT GATTGGAGATTCAGTGCATGGCTGGGGGTTCTGATGGAGCTGTGGCTACTGAACCACAGCCATCCTGGGAGGCTT TCTCCCATCAGTTGTCTCACACTTAGCTGAGTGAAAGGCACCCTGACAGCATGTGGTGACAGGTGATGTGAGGGC TGGGTGAGCACTTGGGAGGCGCTCTGGGAGAGAGATCCCACTTGGCTGACACCACGGCACCAAGAGC CAAACTCCATCGTTGTCTTCACCACCCTGACCAGAGCCTTGTGCTGTCATCTAGGAACTGGCTGCCCAAACAGGA CCCTGGCAGCCTCCCTGCTGCTGCGGGGATTACCAGGTGCTGGGAGGCAACAAGCTTTCTACCTTCCAGCCTCTC CTTAGAGACACCTATTGGCAGAACCTGACTAAATAGCAGTCAGGGAACTGGGTTGCCTCCAGCCATACAGAACAG AGAGTAGGACAGTGGGGGGGGGGGGGGGGGGGGGCCCACAGCCCTCAGCACTGTAGGCTCCCAACCCTAGGCT GTTTCCCCAAAAAGAAAAAGTCTAGTCACTGCTCTGATGCTTGGCCACTCACCCAAGCATTGGGGTAGTTTGTGC AACCTGGCCAACATTGTGAAACCCTGTCTCTACTAAAAATATAAAAATTAGTCGGGCATGATGACAGGCACCTGT AATCCCAGCTACTCAGGAGGCTGAGGCAGGTGAATCACTTGAACCCGGGAGGTGGAGGCTGCAGTGAGTTAAGAT ATAGAAATGGGATTGATTTTTATGTGATCTTGCTAAACTTTATGCATTTTTAAAATTCCTTTTGGATTTCCTATGT CACTTCATTAAAATATAATTCACATGCCATACACTTCACCCATTTAAAATGTATAATTAGGCCAGGTGTGGTGGC TCACGTCTGTAATCCCAGCAGTTTGGGAGGCCAAGGCCCTCAGATCTTGAGCCCAGGAGTTCAAGACCACCCTGG

2427/6881 FIGURE 2232B

MAAHLVKRCTCLLREAARQAPAMAPVGRLRLAWVAHKTLTSSATSPISHLPGSLMEPVEKERASTPYIEKQVDHL
IKKATRPEELLELLGGSHDLDSNQAAMVLIRLSHLLSEKPEDKGLLIQDAHFHQLLCLLNSQIASVWHGTLSKLL
GSLYALGIPKASKELQSVEQEVRWRMRKLKYKHLAFLAESCATLSQEQHSQELLAELLTHLERRWTEIEDSHTLV
TVMMKVGHLSEPLMNRLEDKHVLNRAQDITLPHLCSVLLAFARLNFHPDQEDQFFSLVHEKLGSELPGLEPALQV
DLVWALCVLQQAREAELQAVLHPEFHIQFLGGKSQKDQNTFQKLLHINATALLEYPEYSGPLLPASAVAPGPSAL
DRKVTPLQKELQETLKGLLGSADKGSLEVATQYGWVLDAEVLLDSDGEFLPVRDFVAPHLAQPTGSQSPPPGSKR
LAFLRWEFPNFNSRSKDLLGRFVLARRHIVAAGFLIVDVPFYEWLELKSEWQKGAYLKDKMRKAVAEELAK

GCCGCACGCGGCGATATGGAAGAGGGGCAAGAAGGGCAAGAAGCCTGGAATTGTCTCGCCATTTAAACGAGTA TTCCTAAAAGGTGAAAAGAGTAGAGATAAGAAAGCCCATGAGAAGGTGACAGAGAGGCGCCCTCTGCACACTGTG GTGTTGTCATTGCCTGAGCGCGTCGAGCCAGACAGACTGCTGAGCGACTATATTGAGAAGGAGGTAAAGTATTTA GGTCAGTTAACGTCCATACCAGGATACCTGAATCCCTCCAGTAGGACTGAAATCCTGCATTTCATAGACAATGCA AAGAGAGCCCACCAGCTTCCGGGACACTTGACTCAGGAGCACGATGCTGTGCTCAGCCTGTCTGCGTACAACGTC GCGGAAAGTTCCAGAGGCCTCAGTGCAGGCTCCCTGTCGGAGAGTGCAGTTGGGCCCGTGGAGGCATGCTGCCTG GTCATCCTGGCTGCAGAGAGAGCAAGGTCGCTGCGGAGGAGCTTTGCTGTCTGCTAGGCCAGGTCTTCCAGGTTGTT TACACGGAGTCCACCATCGACTTTCTGGACAGAGCGATATTTGATGGGGCCTCTACCCCGACCCACCACCTGTCC CTGCACAGCGATGACTCTTCTACAAAAGTGGACATTAAGGAGACCTACGAGGTGGAAGCCAGCACTTTCTGCTTC ACTGAGCTGCTGCAGGACTACATGCTGACGCTGCGCACCAAGCTGTCATCACAGGAGATCCAGCAGTTTGCAGCA CTGCTGCACGAGTACCGCAATGGGGCCTCTATCCACGAGTTCTGCATCAACCTGCGGCAGCTCTACGGGGACAGC TCCAGTTCCACCACCAATGGGAACAGGGCCACGGGCAGCTCTGATGACCGGTCGGCACCCTCAGAGGGGGATGAG TGGGACCGCATGATCTCGGACATCAGCAGCGACATTGAGGCGCTGGGCTGCAGCATGGACCAGGACTCAGCA<u>TGA</u>

MEEEGKKGKKPGIVSPFKRVFLKGEKSRDKKAHEKVTERRPLHTVVLSLPERVEPDRLLSDYIEKEVKYLGQLTS IPGYLNPSSRTEILHFIDNAKRAHQLPGHLTQEHDAVLSLSAYNVKLAWRDGEDIILRVPIHDIAAVSYVRDDAA HLVVLKTAQDPGISPSQSLCAESSRGLSAGSLSESAVGPVEACCLVILAAESKVAAEELCCLLGQVFQVVYTEST IDFLDRAIFDGASTPTHHLSLHSDDSSTKVDIKETYEVEASTFCFPESVDVGGASPHSKTISESELSASATELLQ DYMLTLRTKLSSQEIQQFAALLHEYRNGASIHEFCINLRQLYGDSRKFLLLGLRPFIPEKDSQHFENFLETIGVK DGRGIITDSFGRHRRALSTTSSSTTNGNRATGSSDDRSAPSEGDEWDRMISDISSDIEALGCSMDQDSA

 ${\tt MAGGKAGKDSGKAKAKAVSRSQRAGLQFPVGRIHRHLKTRTTSHGRVGATAAVYSAAILEYLTAEVLELAGNASK}\\ {\tt DLKVKRITPRHLQLAIRGDEELDSLIKATIAGGGVIPHIHKSLIGKKGQQKTA}$

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2433/6881 FIGURE 2238

GTTTTGCAGACGCCACCGCCGAGGAAAACCGTGTACTATTAGCCATG
CCGTCGACGGCGAGCCCTTGGGCCGCGTCTCCTTTGAGCTGTTTGCAGACAAGGTCCCAAAGACAGCAGAAAATT
TTCGTGCTCTGAGCACTGGAGAGAAAGGATTTGGTTATAAGGGTTCCTGCTTTCACAGAATTATTCCAGGGTTTA
TGTGTCAGGGTGGTGACTTCACACGCCATAATGGCACTGGTGGCAAGTCCATCTATGGGGAGAAATTTGAAGATG
AGAACTTCATCCTAAAGCATACGGGTCCTGGCATCTTGTCCATGGCAAATGCTGGACCCAACACAAATGGTTCCC
AGTTTTTCATCTGCACTGCCAAGACTGAGTGGTTGGATGGCAAGCATGTGGTGTTTGGCAAAGTGAAAGAAGGCA
TGAATATTGTGGAGGCCATGGAGCGCTTTGGGTCCAGGAATGGCAAGACCAGCAAGAAGATCACCATTGCTGACT
GTGGACAACTCGAATAAGTTTGACTTGTGTTTTATCTTAACCACCAGATCATTCCTTCTGTAGCTCAGGAGAGCA
CCCCTCCACCCCATTTGCTCGCAGTATCCTAGAATCTTTGTGCTCCGCTGCAGTTCCCTTTGGGTTCCATGTTT
TCCTTGTTCCCTCCCATGCCTAGCTGGATTGCAGAGTTAAGTTTATGAAATAAAAACTAAATAACAATT
GTC

MVNPTVFFDIAVDGEPLGRVSFELFADKVPKTAENFRALSTGEKGFGYKGSCFHRIIPGFMCQGGDFTRHNGTGG KSIYGEKFEDENFILKHTGPGILSMANAGPNTNGSQFFICTAKTEWLDGKHVVFGKVKEGMNIVEAMERFGSRNG KTSKKITIADCGQLE

2435/6881 FIGURE 2240A

GCAGTTGTGAAAAACTTCAGGACAAAAATGTTTCATTTAAGGACTTGTGCTGCTAAGTTGAGGCCATTGACGGCT TCCCAGACTGTTAAGACATTTTCACAAAACAGACCAGCAGCAGCTAGGACATTTCAACAGATTCGGTGCTATTCT GCACCTGTTGCTGAGCCCTTTCTCAGTGGGACTAGTTCGAACTATGTGGAGGAGATGTACTGTGCTG GCCTACCAGAGTCCCCTGAGCCGAGGCTCCCTGGCTGCTGTGGCCCATGCACAGTCCCTGGTAGAAGCA CAGCCCAACGTGGACAAGCTCGTGGAGGACCACCTGGCAGTGCAGTCGCTCATCAGGGCATATCAGATACGAGGG CACCATGTAGCACAGCTGGACCCCCTGGGGATTTTGGATGCTGATCTGGACTCCTCCGTGCCCGCTGACATTATC TCATCCACAGACAAACTTGGGTTCTATGGCCTGGATGAGTCTGACCTCGACAAGGTCTTCCACTTGCCCACCACC ACTTTCATCGGGGGACAGGAATCAGCACTTCCTCTGCGGGAGATCATCCGTCGGCTGGAGATGGCCTACTGCCAG CATATTGGGGTGGAGTTCATGTTCATCAATGACCTGGAGCAGTGCCAGTGGATCCGGCAGAAGTTTGAGACCCCT GGGATCATGCAGTTCACAAATGAGGAGAAACGGACCCTGCTGGCCAGGCTTGTGCGGTCCACCAGGTTTGAGGAG TTCCTACAGCGGAAGTGGTCCTCTGAGAAGCGCTTTGGTCTAGAAGGCTGCGAGGTACTGATCCCTGCCCTCAAG ACCATCATTGACAAGTCTAGTGAGAATGGCGTGGACTACGTGATCATGGGCATGCCACACAGAGGGCGGCTGAAC GTGCTTGCAAATGTCATCAGGAAGGAGCTGGAACAGATCTTCTGTCAATTCGATTCAAAGCTGGAGGCAGCTGAT GAGGGCTCCGGAGATGTGAAGTACCACCTGGGCATGTATCACCGCAGGATCAATCGTGTCACCGACAGGAACATT ACCTTGTCCTTGGTGGCCAACCCTTCCCACCTTGAGGCCGCTGACCCCGTGGTGATGGGCAAGACCAAAGCCGAA CAGTTTTACTGTGGCGACACTGAAGGGAAAAAGGTCATGTCCATCCTGTTGCATGGGGATGCTGCATTTGCTGGC CAGGGCATTGTGTACGAGACCTTCCACCTCAGCGACCTGCCATCCTACACAACTCATGGCACCGTGCACGTGGTC GTCAACAACCAGATCGGCTTCACCACCGACCCTCGGATGGCCCGCTCCTCCCCCTACCCCACTGACGTGGCCCGA GTGGTGAATGCCCCCATTTTCCACGTGAACTCAGATGACCCCGAGGCTGTCATGTACGTGTGCAAAGTGGCGGCC GAGTGGAGGAGCACCTTCCACAAGGACGTGGTTGTCGATTTGGTGTGTTACCGGCGCAACGGCCACAACGAGATG GATGAGCCCATGTTCACGCAGCCGCTCATGTACAAGCAGATCCGCAAGCAGAAGCCTGTGTTACAGAAGTACGCT GAGCTGCTGGTGTCGCAGGGTGTGGTCAACCAGCCTGAGTATGAGGAGGAAATTTCCAAGTATGATAAGATCTGT TTCTTCACCCTGGACGGCCAGCCCAGGAGCATGTCCTGCCCCTCCACGGGTCTGACGGAGGATATTCTGACACAC ATCGGGAATGTGGCTAGTTCTGTGCCTGTGGAAAACTTTACTATTCATGGAGGGCTGAGCCGGATCTTGAAGACT CGTGGGGAAATGGTGAAGAACCGGACTGTGGACTGGGCTCTAGCGGAGTACATGGCGTTTGGCTCCTGAAG GAGGGCATCCACATTCGGCTGAGCGGCCAGGACGTGGAGCGGGGCACATTCAGCCACCGCCACCATGTGCTCCAT GACCAGAATGTGGACAAGAGAACCTGCATCCCCATGAACCATCTCTGGCCCAATCAGGCCCCCTATACTGTGTGC AACAGCTCACTGTCTGAGTACGGCGTGCTGGGCTTTGAGCTGGGCTTCGCCATGGCCAGTCCTAATGCCCTGGTC CTCTGGGAAGCCCAATTTGGTGACTTCCACAACACGGCCCAGTGTATCATCGACCAGTTCATCTGCCCGGGACAA GCCAAGTGGGTGCGGCAGAATGGCATCGTGTTGCTGCTGCCCCATGGCATGGAGGGCATGGGTCCAGAACATTCC TCCGCCCGCCCAGAGCGGTTCTTGCAGATGTGCAACGATGACCCAGATGTCCTGCCAGACCTTAAAGAAGCCAAC TTCGACATCAATCAGCTATATGACTGCAATTGGGTTGTTGTCAACTGCTCCACTCCTGGCAACTTCTTCCACGTG CTACGACGCCAGATCCTGCTGCCATTCCGGAAGCCGTTAATTATCTTCACCCCCAAATCCCTGTTGCGCCACCCC GAGGCCAGATCCAGCTTTGATGAGATGCTTCCAGGAACCCACTTCCAGCGGGTGATCCCAGAAGATGGCCCTGCA GCTCAGAACCCAGAAAATGTCAAAAGGCTTCTCTTCTGCACCGGCAAAGTGTATTATGACCTCACCCGGGAGCGC AAAGCACGCGACATGGTGGGGCAGGTGGCCATCACAAGGATTGAGCAGCTGTCGCCATTCCCCTTTGACCTCCTG CTGAAGGAGGTGCAGAAGTACCCCAATGCTGAGCTGGCCTGGTGCCAGGAGGAGCACAAGAACCAAGGCTACTAT GCTGCTCCAGCCACCGGCAACAAGAAGACCCACCTGACGGAGCTGCAGCGCCTCCTGGACACGGCCTTCGACCTG GACGTCTTCAAGAACTTCTCGTAGATGCTGCCTAGGGTTGCTTGGGCCACTGCCCTCTCCACACCCATGACTGCC CCTTGCTTCTCAACTAAAGAATAGTGCCTCAGCGCTGCCCACACCACCGCCCTCCTCGCTGTGCCACCACCCCTC CCTCTGCTCTCATAGGAGTTAGGCTGTCGTCCCCCTCCAGTGCTTGGCTGCCCACAGGCCACACGCTGCCCAGG CTTGGGGAGGGGTCAGCTCTGGCCACAATCCTCCCCACCAGTCTCACCCACTAGGATAGGAACTGGGCCTTGTGT GCTGGCTTCCGCTGTCACCCAGCAAGGCACAGGCTCCTGTATTTGAGACTAGGATAGCTTCATCTTGAGCCTGAG

2436/6881 FIGURE 2240B

MFHLRTCAAKLRPLTASQTVKTFSQNRPAAARTFQQIRCYSAPVAAEPFLSGTSSNYVEEMYCAWLENPKSVHKS WDIFFRNTNAGAPPGTAYQSPLPLSRGSLAAVAHAQSLVEAQPNVDKLVEDHLAVQSLIRAYQIRGHHVAQLDPL GILDADLDSSVPADIISSTDKLGFYGLDESDLDKVFHLPTTTFIGGQESALPLREIIRRLEMAYCQHIGVEFMFI NDLEQCQWIRQKFETPGIMQFTNEEKRTLLARLVRSTRFEEFLQRKWSSEKRFGLEGCEVLIPALKTIIDKSSEN GVDYVIMGMPHRGRLNVLANVIRKELEQIFCQFDSKLEAADEGSGDVKYHLGMYHRRINRVTDRNITLSLVANPS HLEAADPVVMGKTKAEQFYCGDTEGKKVMSILLHGDAAFAGQGIVYETFHLSDLPSYTTHGTVHVVVNNQIGFTT DPRMARSSPYPTDVARVVNAPIFHVNSDDPEAVMYVCKVAAEWRSTFHKDVVVDLVCYRRNGHNEMDEPMFTQPL MYKQIRKQKPVLQKYAELLVSQGVVNQPEYEEEISKYDKICEEAFARSKDEKILHIKHWLDSPWPGFFTLDGQPR SMSCPSTGLTEDILTHIGNVASSVPVENFTIHGGLSRILKTRGEMVKNRTVDWALAEYMAFGSLLKEGIHIRLSG QDVERGTFSHRHHVLHDQNVDKRTCIPMNHLWPNQAPYTVCNSSLSEYGVLGFELGFAMASPNALVLWEAQFGDF HNTAQCIIDQFICPGQAKWVRQNGIVLLLPHGMEGMGPEHSSARPERFLQMCNDDPDVLPDLKEANFDINQLYDC NWVVVNCSTPGNFFHVLRRQILLPFRKPLIIFTPKSLLRHPEARSSFDEMLPGTHFQRVIPEDGPAAQNPENVKR LLFCTGKVYYDLTRERKARDMVGQVAITRIEQLSPFPFDLLLKEVQKYPNAELAWCQEEHKNQGYYDYVKPRLRT TISRAKPVWYAGRDPAAAPATGNKKTHLTELQRLLDTAFDLDVFKNFS

WO 2004/030615 PCT/US2003/028547

2438/6881 FIGURE 2242

 $\tt CTCTGAAGCACTGGGCTTCGAACACTGGGCCTCGATCCCCGGCTCCTTCAGGCTGTCACCGATCTGGGCTGGTC$ GCGACCTACGCTGATCCAGGAGAAGGCCATCCCACTGGCCCTAGAAGGGAAGGACCTCCTGGCTCGGGCCCGCAC GGGCTCCGGGAAGACGGCCGCTTATGCTATTCCGATGCTGCAGCTGTTGCTCCATAGGAAGGCGACAGGTCCGGT GGTAGAACAGGCAGTGAGAGGCCTTGTTCTTGTTCCTACCAAGGAGCTGGCACGGCAAGCACAGTCCATGATTCA GCAGCTGGCTACCTACTGTGCTCGGGATGTCCGAGTGGCCAATGTCTCAGCTGCTGAAGACTCAGTCTCTCAGAG AGCTGTGCTGATGGAGAAGCCAGATGTGGTAGTAGGGACCCCATCTCGCATATTAAGCCACTTGCAGCAAGACAG CCTGAAACTTCGTGACTCCCTGGAGCTTTTGGTGGTGGATGAAGCTGACCTTCTTTTTTCCTTTTGGCTTTGAAGA AGAGCTCAAGAGTCTCCTCTGTCACTTGCCCCGGATTTACCAGGCTTTTCTCATGTCAGCTACTTTTAACGAGGA CGTACAAGCACTCAAGGAGCTGATATTACATAACCCGGTTACCCTTAAGTTACAGGAGTCCCAGCTGCCTGGGCC AGACCAGTTACAGCAGTTTCAGGTGGTCTGTGAGACTGAGGAAGACAAATTCCTCCTGCTGTATGCCCTGCTCAA GCTGTCATTGATTCGGGGCAAGTCTCTGCTCTTTGTCAACACTCTAGAACGGAGTTACCGGCTACGCCTGTTCTT GGAACAGTTCAGCATCCCCACCTGTGTGCTCAATGGAGAGCTTCCACTGCGCTCCAGGTGCCACATCATCTCACA GTTCAACCAAGGCTTCTACGACTGTGTCATAGCAACTGATGCTGAAGTCCTGGGGGCCCCAGTCAAGGGCAAGCG TCGGGGCCGAGGGCCCAAAGGGGACAAGGCCTCTGATCCGGAAGCAGGTGTGGCCCGGGGCATAGACTTCCACCA CGCTAACAACCCAGGCATAGTCTTAACCTTTGTGCTTCCCACGGAGCAGTTCCACTTAGGCAAGATTGAGGAGCT TCTCAGTGGAGAGAACAGGGGCCCCATTCTGCTCCCCTACCAGTTCCGGATGGAGGAGATCGAGGGCTTCCGCTA TCGCTGCAGGGATGCCATGCGCTCAGTGACTAAGCAGGCCATTCGGGAGGCAAGATTGAAGGAGATCAAGGAAGA GCTTCTGCATTCTGAGAAGCTTAAGACATACTTTGAAGACAACCCTAGGGACCTCCAGCTGCTGCGGCATGACCT ACCTTTGCACCCCGCAGTGGTGAAGCCCCACCTGGGCCATGTTCCTGACTACCTGGTTCCTCCTGCTCTCCGTGG CCTGGTACGCCCTCACAAGAAGCGGAAGAAGCTGTCTTCCTCTTGTAGGAAGGCCAAGAGAGCCAAAGTCCCAGAA CCCACTGCGCAGCTTCAAGCACAAAGGAAAGAAATTCAGACCCACAGCCAAGCCCTCC<u>TGA</u>GGTTGTTGGGCCTC GCCTGAACAGACAGTTCTGGGGCCGGCAGTGCTGGGCCCTTTAGCTCCTTGGCACTTCCAAGCTGGCATCTTGCC

MEDSEALGFEHMGLDPRLLQAVTDLGWSRPTLIQEKAIPLALEGKDLLARARTGSGKTAAYAIPMLQLLLHRKAT GPVVEQAVRGLVLVPTKELARQAQSMIQQLATYCARDVRVANVSAAEDSVSQRAVLMEKPDVVVGTPSRILSHLQ QDSLKLRDSLELLVVDEADLLFSFGFEEELKSLLCHLPRIYQAFLMSATFNEDVQALKELILHNPVTLKLQESQL PGPDQLQQFQVVCETEEDKFLLYALLKLSLIRGKSLLFVNTLERSYRLRLFLEQFSIPTCVLNGELPLRSRCHI ISQFNQGFYDCVIATDAEVLGAPVKGKRRGRGPKGDKASDPEAGVARGIDFHHVSAVLNFDLPPTPEAYIHRAGR TARANNPGIVLTFVLPTEQFHLGKIEELLSGENRGPILLPYQFRMEEIEGFRYRCRDAMRSVTKQAIREARLKEI KEELLHSEKLKTYFEDNPRDLQLLRHDLPLHPAVVKPHLGHVPDYLVPPALRGLVRPHKKRKKLSSSCRKAKRAK SQNPLRSFKHKGKKFRPTAKPS

FIGURE 2244

WO 2004/030615 PCT/US2003/028547

FIGURE 2246

GCCATGTTTTCTGAGCAGGCTGCCCAGAGGGCCCACACTCTACTGTCCCCACCATCAGCCAACAATGCCACCTTT GCCCGGGTGCCAGTGGCAACCTACACCAACTCCTCACAACCCTTCCGGCTAGGAGAGCGCAGCTTTAGCCGGCAG TATGCCCACATTTATGCCACCCGCCTCATCCAAATGAGACCCTTCCTGGAGAACCGGGCCCAGCAGCACTGGGGC AGTGGAGTGGGAGTGAAGAAGCTGTGTGAACTGCAGCCTGAGGAGAAGTGCTGTGTGGGGGCACTCTGTTCAAG GCCATGCCGCTGCAGCCCTCCATCCTGCGGGAGGTCAGCGAGGAGCACAACCTGCTCCCCCAGCCTCCTCGGAGT AAATACATACACCCAGATGACGAGCTGGTCTTGGAAGATGAACTGCAGCGTATCAAACTAAAAGGCACCATTGAC GTGTCAAAGCTGGTTACGGGGACTGTCCTGGCTGTGTTTTGGCTCCGTGAGAGACGACGGGAAGTTTCTGGTGGAG GACTATTGCTTTGCTGACCTTGCTCCCCAGAAGCCCGCACCCCCACTTGACACAGATAGGTTTGTGCTACTGGTG TCCGGCCTGGGCCTGGGTGGCGGTGGAGGCCGAGCCTGCTGGCACCCAGCTGCTGGTGGATGTGACGGGG CAGCTTGGGGACGAAGGGGAGCAGTGCAGCGCCCCACGTCTCCCGGGTTATCCTCGCTGGCAACCTCCTCAGC GCTGTTAAGATGCTGGATGAGATCCTCCTGCAGCTGAGCGCCTCAGTGCCCGTGGACGTGATGCCAGGCGAGTTT GATCCCACCAATTACACGCTCCCCAGCAGCCCCTCCACCCCTGCATGTTCCCGCTGGCCACTGCCTACTCCACG CTCCAGCTGGTCACCAACCCCTACCAGGCCACCATTGATGGAGTCAGATTTTTGGGGACATCAGGACAGAACGTG AGTGACATTTTCCGATACAGCAGCATGGAGGATCACTTGGAGATCCTGGAGTGGACCCTGCGGGTCCGTCACATC AGCCCCACAGCCCCGGACACTCTAGGTTGTTACCCCTTCTACAAAACTGACCCGTTCATCTTCCCAGAGTGCCCG CATGTCTACTTTTGTGGCAACACCCCCAGCTTTGGCTCCAAAATCATCCGAGGTCCTGAGGACCAGACAGTGCTG GCTGATGCG

MFSEQAAQRAHTLLSPPSANNATFARVPVATYTNSSQPFRLGERSFSRQYAHIYATRLIQMRPFLENRAQQHWGS
GVGVKKLCELQPEEKCCVVGTLFKAMPLQPSILREVSEEHNLLPQPPRSKYIHPDDELVLEDELQRIKLKGTIDV
SKLVTGTVLAVFGSVRDDGKFLVEDYCFADLAPQKPAPPLDTDRFVLLVSGLGLGGGGGESLLGTQLLVDVVTGQ
LGDEGEQCSAAHVSRVILAGNLLSHSTQSRDSINKAKYLTKKTQAASVEAVKMLDEILLQLSASVPVDVMPGEFD
PTNYTLPQQPLHPCMFPLATAYSTLQLVTNPYQATIDGVRFLGTSGQNVSDIFRYSSMEDHLEILEWTLRVRHIS
PTAPDTLGCYPFYKTDPFIFPECPHVYFCGNTPSFGSKIIRGPEDQTVLLVTVPDFSATQTACLVNLRSLACQPI
SFSGFGAEDDDLGGLGGP

2444/6881 FIGURE 2248A

TCCCTCGCTCACCCCATCCTCTCCCGCCCCTTCCTGGATTCCCTCACCCGTCTCGATCCCCTCTCCGCCCTTT CCCAGAGACCCAGAGCCCCTGACCCCCGCGCCCTCCCCGGAGCCCCCGCGCGTGCCGCGGCCATGGCGGCCGT GCGCGGGCCCCCTGCTCAGCTGCCTCCTGGCGTTGCTGGCCCTGTGCCCTGGAGGGCGCCCGCAGACGGTGCT GACCGACGACGACGACGACTTCCTCGAGGGCTTCCTGTCAGAGCTAGAACCTGAGCCCCGGGAGGACGACGT GGAGGCCCCGCCGCCTCCCGAGCCCACCCCGCGGGTCCGAAAAGCCCAGGCGGGGGCAAGCCAGGGAAGCGGCC AGAGAAGCCACCAAGGCCACCAAGAAGCCCCCGTCAGGGAAGAGGCCCCCCATTCTGGCTCCCTCAGAAACCCT GGAGTGGCCACTGCCCCCAGCCCTGGCCCGAGGAGCTACCCCAGGAGGAGGGGGCGCCCTCTCAAA TAACTGGCAGAATCCAGGAGAGAGACCCATGTGGAGGCACGGGAGCACCAGCCTGAGCCGGAGGAGAGACCGA GCAACCCAGGCCACCCCAAGCAGAAGGAGGAGGCCCGAGCGGGTCTGGCCAGAGCCCCCTGAGGAGAAGGCCCC GGCCCCAGCCCCGGAGGAGAGGATTGAGCCTCCTGTGAAGCCTCTGCTGCCCCCGCTGCCCCCTGACTATGGTGA TGGTTACGTGATCCCCAACTACGATGACATGGACTATTACTTTGGGCCTCCTCCGCCCCAGAAGCCCGATGCTGA GCGCCAGACAGACGAAGAGAGGAGCTGAAGAAACCCAAAAAGGAGGACAGCCCCCAAGGAGGAGACCGA TACGGAGAAAGTCAAGTGTCCCCCCATTGGGATGGAGTCACACCGTATTGAGGACAACCAGATCCGAGCCTCCTC CATGCTGCGCCACGGCCTGGGGGCACAGCGCGGCCGGCTCAACATGCAGACCGGTGCCACTGAGGACGACTACTA TGATGGTGCGTGTGTGCCGAGGACGATGCCAGGACCCAGTGGATAGAGGTGGACACCAGGAGGACTACCCGGTT CACAGGCGTCATCACCCAGGGCAGAGACTCCAGCATCCATGACGATTTTGTGACCACCTTCTTCGTGGGCTTCAG CAATGACAGCCAGACATGGGTGATGTACACCAACGGCTATGAGGAAATGACCTTTCATGGGAACGTGGACAAGGA CACACCCGTGCTGAGTGAGCTCCCAGAGCCGGTGGTGGCTCGTTTCATCCGCATCTACCCACTCACCTGGAATGG CAGCCTGTGCATGCGCCTGGAGGTGCTGGGGTGCTCTGTGGCCCCTGTCTACAGCTACTACGCACAGAATGAGGT GGTGGCCACCGATGACCTGGATTTCCGGCACCACAGCTACAAGGACATGCGCCAGCTCATGAAGGTGGTGAACGA GGAGTGCCCCACCATCACCCGCACTTACAGCCTGGGCAAGAGCTCACGAGGCCTCAAGATCTATGCCATGGAGAT CTCAGACACCCTGGGGAGCATGAACTGGGGGAGCCCGAGTTCCGCTACACTGCTGGGATCCATGGCAACGAGGT GCTGGGCCGAGAGCTGTTGCTGCTGCTCATGCAGTACCTGTGCCGAGAGTACCGCGATGGGAACCCACGTGTGCG CAGCCTGGTGCAGGACACACGCATCCACCTGGTGCCCTCACTGAACCCTGATGGCTACGAGGTGGCAGCGCAGAT GGGCTCAGAGTTTGGGAACTGGGCGCTGGGACTGTGGACTGAGGAGGGCTTTGACATCTTTGAAGATTTCCCGGA TCTCAACTCTGTGCTCTGGGGAGCTGAGGAGGAGAATGGGTCCCCTACCGGGTCCCCAACAATAACTTGCCCAT CCCCTTCGTGCTGGGAGCAAATCTGAACGGCGGCGAGCGGCTAGTATCCTACCCCTACGATATGGCCCGCACGCC TACCCAGGAGCAGCTGCTGGCCGCAGCCATGGCAGCAGCCCGGGGGGAGGATGAGGACGAGGTCTCCGAGGCCCA GGAGACTCCAGACCACGCCATCTTCCGGTGGCTTGCCATCTCCTTCGCCTCCGCACACCTCACCTTGACCGAGCC CTACCGCGGAGGCTGCCAAGCCCAGGACTACACCGGCGGCATGGGCATCGTCAACGGGGCCAAGTGGAACCCCCG GACCGGGACTATCAATGACTTCAGTTACCTGCATACCAACTGCCTGGAGCTCTCCTTCTACCTGGGCTGTGACAA GTTCCCTCATGAGAGTGAGCTGCCCCGCGAGTGGGAGAACAACAAGGAGGCGCTGCTCACCTTCATGGAGCAGGT GCACCGCGGCATTAAGGGGGTGGTGACGGACGAGCAAGGCATCCCCATTGCCAACGCCACCATCTCTGTGAGTGG CATTAATCACGGCGTGAAGACAGCCAGTGGTGGTGATTACTGGCGAATCTTGAACCCGGGTGAGTACCGCGTGAC AGCCCACGCGGAGGGCTACACCCCGAGCGCCAAGACCTGCAATGTTGACTATGACATCGGGGCCACTCAGTGCAA CTTCATCCTGGCTCGCTCCAACTGGAAGCGCATCCGGGAGATCATGGCCATGAACGGGAACCGGCCTATCCCACA CATAGACCCATCGCGCCCTATGACCCCCCAACAGCGCCCTGCAGCAGCGCCTACAACACCCCCTGCGGCT TCGGGCACAGATGCGGCTGCGGCGCCTCAACGCCACCACCACCTAGGCCCCCACACTGTGCCTCCCACGCTGCC GGAGTCGGAGACTGAGACCTACACAGAGGTGGTGACAGAGTTTGGGACCGAGGTGGAGCCCGAGTTTGGGACCAA GGTGGAGCCCGAGTTTGAGACCCAGTTGGAGCCTGAGTTTGAGACCCAGCTGGAACCCGAGTTTGAGGAAGAGGA GGAGGAGAAAGAGGAGGAGATAGCCACTGGCCAGGCATTCCCCTTCACAACAGTAGAGACCTACACAGTGAA

2445/6881 FIGURE 2248B

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2446/6881 FIGURE 2249

 ${\tt GTTTCCCTCTGCGTTCGCTCCGCGCTGCTGGAGGCTGTCGTCCCA} \underline{{\tt ATG}} {\tt CTCCCCAAACGGCGGCGAGCGCGGGTC}$ GGGTCCCCTAGCGGCGATGCCGCTTCCTCCACGCCGCCCTCGACGCGCTTCCCGGGAGTCGCCATCTACCTGGTC GAGCCTCGCATGGGTCGCAGCCGCGGGCCTTCCTCACAGGCCTGGCGCGCTCCAAAGGCTTCCGCGTCCTTGAC GCCTGCAGCTCCGAAGCGACACATGTTGTGATGGAAGAGACCTCAGCAGAGGAGGCCGTCAGCTGGCAGGAGCGC AGGATGGCAGCTGCTCCCCCGGGTTGCACCCCCCAGCTCTGCTGGACATAAGCTGGTTAACAGAGAGCCTGGGA GCATGGATGCCTGCCTATGCCTGCCAGCGCCCTACGCCCCTCACACACCACACACTGGCCTCTCCGAGGCTCTG GAGATACTGGCCGAGGCAGCAGGCTTTGAAGGCAGTGAGGGCCGCCTCCTCACCTTCTGCAGAGCAGCCTCGGTG CTCAAGGCCCTTCCCAGCCCTGTCACAACCCTGAGCCAGCTGCAGGGGGCTTCCCCACTTTGGAGAACACTCCTCT AGGGTTGTCCAGGAGCTGCTGGAGCATGGAGTGTGTGAGGAGGTGGAGAGAGTTCGGCGCTCAGAGAGGTACCAG ACCATGAAGCTCTTCACCCAGATCTTCGGGGTCGGTGTGAAGACTGCTGACCGGTGGTACCGGGAAGGACTGCGA ACCTTAGATGACCTCCGAGAGCCCCCAGAAACTAACCCAACAGCAGAAAGCGGGGCTCCAGCACCACGAC CTGAGCACCCCAGTCCTGCGGTCCGATGTAGATGCCCTGCAGCAGGTGGTGGAGGAAGCTGTGGGGGCAGGCCCTG $\tt CCTGGGGCCACCGTCACGCTGACCGGCGGCTTCCGCAGGGGGGAAGTTGCAGGGCCATGACGTGGACTTCCTCATC$ ACCCACCCAAGGAGGGTCAGGAGGCGGGCTGCTGCCTAGAGTGATGTGCCGCCTGCAGGACCAGGGCCTCATC CTGTACCACCAGCACCAGCACAGCTGCTGTGAGTCCCCTACCCGCCTGGCCCAACAGAGCCACATGGACGCTTTT GAGAGAAGTTTCTGCATTTTCCGCCTACCACAACCTCCAGGGGCTGCTGTGGGGGGATCCACGAGGCCCTGCCCA TCCTGGAAGGCCGTGAGAGTGGACTTGGTAGTTGCACCCGTCAGCCAGTTCCCTTTCGCCCTGCTCGGTTGGACT GGCTCCAAGCTTTCCAGCGGGAGCTGCGCCGCTTCAGCCGGAAGGAGAAGGGCCTGTGGCTGAACAGCCATGGG CTGTTTGACCCGGAGCAGAAGACATTTTTCCAAGCGGCTTCAGAGGAAGACATCTTCAGACACCTGGGCCTTGAG ${ t TACCTTCCTCCAGAGCAGAGAAACGCC} { t TGAGCCTGCCTGTGTCCCCCCACTTCCACTCAGGAAATTGGGCTGCCCC}$ CAACCTGGCCACTGAATGTCTCCAGGCAGATATGCTGCCCCCTGACCCCACCTTCACCCCTCCCCGCCAAGGCC TGGCTCTTCCGGAGGTCAATTGTGCCTGCAGGATCAGTTGAGCCCCTGCTGGTGTGCTGCAGGGTGTGATGAGGT GGGAGCCCTCAGTGCCAGCCTCATCACTGTGTGACCCTGGGTCTGCTCTTAGCCTCCCCATGGCTCACGTTCCTG CCCTGGATGGGATGTGAGTGGGGCCCACATCGTGGAGCTGTGGTGGGGCCTGCAGTCATGAATGGCAAGTGGTCC CTGATGTGCAGTGTCTCATTAGTTGCACTGCAGTTAACTGTGGCTCCTGCAGGGCACCCTGCCCAGAATGCCCAG AAGAGAACCATGCATACCTGCACTGCATTTGAGAGCCATGAGCTGGAGGCTGTGGTTCGTGCCAGCAAGGAGCCT ATGGGGCTTCAGTACTGCAGCGCCCCGAGCCAGGCTCTGTGCTTCTGCCTTTAAGGCCTGTTCTCAGCACAATGT CTCAAAAATAGGTCATATCCTGCCACTCCCGTCGCAGAGCCCTTTAATGGTTCCAAACCCTAAGTCCACACATAG CCCCTGGCTCTGGCATCTCTCCAGCCCCACTGGCCCCGAGCTGCTTGACTCACCGGCTTCCTATTTGATGCACCC AGGCCCCTTGTGGCCAACTCCCTCCCCTTCTCACTGAGGCAGAAGCACTGAGGTGGGCTGGACATGGGTGCCCT CCACGTCCCTCATATCCCCAGGCACACTCTGGCCTCAGGTTTTGCCCTGGCCATGTCATCTACCTGGAGTGGGCC CTCCCCTTCTTCAGGCCTTGAATCAAAAGCCACTTTGTTAGGCGAGGATTTCCCAGACCACTCATCACATTAAAA AATATTTTGAAAACATGCAGT

MLPKRRARVGSPSGDAASSTPPSTRFPGVAIYLVEPRMGRSRRAFLTGLARSKGFRVLDACSSEATHVVMEETS AEEAVSWQERMAAAPPGCTPPALLDISWLTESLGAGQPVPVECRHRLEVAGPRKGPLSPAWMPAYACQRPTPLT HHNTGLSEALEILAEAAGFEGSEGRLLTFCRAASVLKALPSPVTTLSQLQGLPHFGEHSSRVVQELLEHGVCEEV ERVRRSERYQTMKLFTQIFGVGVKTADRWYREGLRTLDDLREQPQKLTQQQKAGLQHHQDLSTPVLRSDVDALQQ VVEEAVGQALPGATVTLTGGFRRGKLQGHDVDFLITHPKEGQEAGLLPRVMCRLQDQGLILYHQHQHSCCESPTR LAQQSHMDAFERSFCIFRLPQPPGAAVGGSTRPCPSWKAVRVDLVVAPVSQFPFALLGWTGSKLFQRELRRFSRK EKGLWLNSHGLFDPEQKTFFQAASEEDIFRHLGLEYLPPEQRNA

FIGURE 2251

 ${\tt GGCACGAGGGCGGAGACTGCGGGGCGGGCC} \underline{{\tt ATC}} {\tt GCGGCGAACCTGAGCCGGAACGGGCCAGCGCTGCAAGAGGCCC}$ TACGTGCGGGTGGTCACCGAGAAGTCCCCGACCGACTGGGCTCTCTTTACCTATGAAGGCAACAGCAATGACATC TTCTGCAGAGTGAAGGACCCCAACTCTGGACTGCCCAAATTTGTCCTCATCAACTGGACAGGCGAGGGCGTGAAC GATGTGCGGAAGGGAGCCTGTGCCAGCCACGTCAGCACCATGGCCAGCTTCCTGAAGGGGGCCCATGTGACCATC AACGCACGGGCCGAGGAGGATGTGGAGCCTGAGTGCATCATGGAGAAGGTGGCCAAGGCTTCAGGTGCCAACTAC AGCTTTCACAAGGAGAGTGGCCGCTTCCAGGACGTGGGACCCCAGGCCCCAGTGGGCTCTGTGTACCAGAAGACC AATGCCGTGTCTGAGATTAAAAGGGTTGGTAAAGACAGCTTCTGGGCCAAAGCAGAAGGAGGAGGAGGAGAACCGT CGGCTGGAGGAAAAGCGGCGGGCCGAGGAGGCACAGCGGCAGCTGGAGCAGCGCGGGAGCGTGAGCTGCGT GAGGCTGCACGCCGGGAGCAGCGCTATCAGGAGCAGGGTGGCGAGGCCAGCCCCCAGAGCAGGACGTGGGAGCAG CAGCAAGAAGTGGTTTCAAGGAACCGAAATGAGCAGGAGTCTGCCGTGCACCCGAGGGAGATTTTCAAGCAGAAG GAGAGGGCCATGTCCACCCCCCCCTCCAGTCCTCAGCCTGGCAAGCTGAGGAGCCCCTTCCTGCAGAAGCAG CTCACCCAACCAGAGACCCACTTTGGCAGAGAGCCAGCTGCTGCCATCTCAAGGCCCAGGGCAGATCTCCCTGCT CAGGAGACCTICTACGAGCAGCCCCCACTGGTGCAGCAGCAGGTGCTGGCTCTGAGCACATTGACCACCACATT CAGGGCCAGGGGCTCAGTGGGCAAGGGCTCTGTGCCCGTGCCCTGTACGACTACCAGGCAGCCGACGACACAGAG ATCTCCTTTGACCCCGAGAACCTCATCACGGGCATCGAGGTGATCGACGAAGGCTGGTGGCGTGGCTATGGGCCG ${\tt GATGGCCATTTTGGCATGTTCCCTGCCAACTACGTGGAGCTCATTGAG{\tt TGA}GGCTGAGGGCACATCTTGCCCTTC}$ GACCCCCAGTGAGGATGAGGCCTCAGGGCTCCCTCCGGCTTGGCAGACTCAGCCTGTCACCCCAAATGCAGCAAT GGCCTGGTGATTCCCACACATCCTTCCTGCATCCCCCGACCCTCCCAGACAGCTTGGCTCTTGCCCCTGACAGGA TACTGAGCCAAGCCCTGTGGCCAAGCCCTGAGTGGCCACTGCCAAGCTGCGGGGAAGGGTCCTGAGCAGGG GCATCTGGGAGGCTCTGGCTTCTTGCATTTATTTGCCTTTTTTCTTTTCTCTTGCTTCTAAGGGGTGGTGG CCACCACTGTTTAGAATGACCCTTGGGAACAGTGAACGTAGAGAATTGTTTTTAGCAGAGTTTGTGACCAAAGTC AGAGTGGATCATGGTGGTTTGGCAGCAGGGAATTTGTCTTGTTGGAGCCTGCTCTGTGCTCCCACTCCATTTCT CTGTCCCTCTGCCTGGGCTATGGGAAGTGGGGATGCAGATGGCCAAGCTCCCACCCTGGGTATTCAAAAACGGCA GACACAACATGTTCCTCCACGCGGCTCACTCGATGCCTGCAGGCCCCAGTGTGTGCCTCAACTGATTCTGACTTC AGGAAAAGTAACACAGAGTGGCCTTGGCCTGTTGTCTTCCCCTATTTTCTGTCCCAGCTCATCCGTGTCTCTGAA

WO 2004/030615 PCT/US2003/028547

2449/6881 FIGURE 2252

MAANLSRNGPALQEAYVRVVTEKSPTDWALFTYEGNSNDIRVAGTGEGGLEEMVEELNSGKVMYAFCRVKDPNSG LPKFVLINWTGEGVNDVRKGACASHVSTMASFLKGAHVTINARAEEDVEPECIMEKVAKASGANYSFHKESGRFQ DVGPQAPVGSVYQKTNAVSEIKRVGKDSFWAKAEKEEENRRLEEKRRAEEAQRQLEQERRERELREAARREQRYQ EQGGEASPQSRTWEQQQEVVSRNRNEQESAVHPREIFKQKERAMSTTSISSPQPGKLRSPFLQKQLTQPETHFGR EPAAAISRPRADLPAEEPAPSTPPCLVQAEEEAVYEEPPEQETFYEQPPLVQQQGAGSEHIDHHIQGQGLSGQGL CARALYDYQAADDTEISFDPENLITGIEVIDEGWWRGYGPDGHFGMFPANYVELIE

GGGGAGAGCGGGTGTTTGAAGGCTCCGCGGACCGGCACTAGGAGCCGGGGGCGGGTCCGTGACCCTCCGGCTGCT CCCCAGGCCCGCGGGCTGCTGACAGAGATACGCGCCGTGGTGCGCACCGAGCCCTTCCAGGACGGCTACAGCCTG TTTGCTGCAAAGTTCATGAGAAAAAGAAGAAAAAGGCCAAGATTGTCGGATGGAAATAATTCATGAGATTGCTGTA CTTGAACTAGCACAAGACAATCCTTGGGTCATTAATTTACATGAAGTTTATGAGACTGCATCAGAAATGATCTTA GATGTTCAAAGACTTATGCGACAGATTTTAGAAGGTGTTCACTTTTTACACACTCGTGATGTAGTTCATCTTGAT TTGAAGCCTCAGAATATTCTGTTGACAAGTGAATCTCCATTGGGTGACATTAAGATTGTTGATTTTGGCCTTTCA AGAATATTGAAGAACAGTGAAGAGCTCCGAGAAATTATGGGTACCCCTGAATATGTGGCTCCTGAAATTCTTAGT TATGATCCTATAAGCATGGCAACAGATATGTGGAGCATTGGAGTGTTAACATATGTCATGCTTACAGGAATATCA CCTTTCTTAGGCAATGATAAACAAGAAACATTCTTAAACATCTCACAGATGAATTTAAGTTATTCTGAGGAAGAA TTTGATGTTTTGTCTGAGTCGGCTGTTGATTTCATCAGGACACTTTTAGTTAAGAAACCTGAAGATCGAGCCACT GCTGAAGAATGTCTAAAGCACCCCTGGTTGACACAGAGCAGTATTCAAGAGCCTTCTTTCAGGATGGAAAAGGCA AAGGAATCCATTGTAACCGAAGAGTTAATTGTAGTTACTTCATATACTCTAGGACAATGCAGACAGTCTGAAAAA GAGAAAATGGAGCAAAAGGCCATTTCCAAACGATTTAAATTTGAGGAACCTTTGCTACAAGAAAATTCCAGGAGAA TTTATCTACTGAGCAATATTTCCCTTTAGAACTTCAAGATTTCTACATTGAAAATGTTAATATTATTATGGACC TGTGGAGTTAGGTGGAAGCCAGATTTTAAAAGTTGCCAACCAGGAGATTTAACAGGTACAGTTACCCGTTTCAAT GTTATTTTTAAGAAGGGAGATGTTGGCACCTTTGAATTCTACATCCTGTTTCTCCAGAATGAGAATTTGTGTACA AAGATATTTGTATTCACTTTCTTTAAAAAATCCAAGTAAAAGTGCCAAAACTACACTTCTGTAAATCTCTTGCAT TATTCATATGTGTATCTATATCTGCATAATGTTTGTTAATGTCTACTAAAATTGCTACTTTTTCACTTTGGATTT GTTTTTGGCAAAATTTTAGTCTAAACAGACATCTAAATTTTCGAGACTTAGAATAACATTCACTAAAGTTTGATA ATGTCTTTTTTAAATATTTTCTTACTGCTTTATAGTGACTTGATTTGGTTTCTGTTGTGTTTTTGCCTAAATACT AGTAACATATCAGTGAAAAACCCTAATTTTTTTTCTCTTCAATGTCACTAGTAAGAGAGGTGGTAATTTTTCACC TCTGAAATTATTCTGGGTTTAGGTGTCAGCTCTTGAGCTGCTTCCCTCATCACACCACACTCACATGCATCTGTT CTCTCTCACACTCTATACCCCTGCCACTTCCTGGCACCTCCCCCCATGCTTGTCATTTAATTTTGGCCACTTGTA GGTATCAGTGTGATCTGATCAACACTCTGGTTACCTTGGTCAGTGAAAAGATGCTACTATATTGCTTTTGTCCCA TGCTGAGTTTCTTATCAGCCCTCAAGCTATGCTAGGAAAAGTTATAAAATGCCAAAATATTTATAAACATTTACT TTGTCCATAAAAATTTACATTGGATACTCTGTAAGTAGGAGGTACTTTGTCCCAAAAAGATGTATAAGAATGTA CTAATAGTTTTATTTGATTAGGATTGAACAGTTCAGTTGTATCTATGCCCCACAGTGACCAGTAAAGTCCAATTA AAATATGGAAATGTAAAAGTGTATGCCGAATACCTTAAAGTAACTAATTATCCTTACACACAAAAGGCTCAGTGC ATTAAATATTTGCCTATC

MAERGYSFSLTTFSPSGKLVQIEYALAAVAGGAPSVGIKAANGVVLATEKKQKSILYDERSVHKVEPITKHIGLV YSGMGPDYRVLVHRARKLAQQYYLVYQEPIPTAQLVQRVASVMQEYTQSGGVRPFGVSLLICGWNEGRPYLFQSD PSGAYFAWKATAMGKNYVNGKTFLEKRYNEDLELEDAIHTAILTLKESFEGQMTEDNIEVGICNEAGFRRLTPTE VKDYLAAIA

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FIGURE 2256

GCTCGGCGCCCTCTTCCCTGCAAACCATGTTTGCCAAAGGCAGAGGCTCGGCGGTGCCCTCGGATGGGCAGGCTT GGGAAAAGTTAGCTTCATACGTCTACGAATATTTACTGCACGTAAGAGTACAGAAATCTGCAGAGACCTTCTTGT CGGAGATTCGATGGGAAAAAAACATCACGTTGGGAGAACCGCCTGGGTTTTTTGCACTCGTGGTGGTGTTATTTG GGGACCTTTACTGTGCAGCTCCTCAAAGGAGAGACACTTGTGAACATTCAAGTGAAGCAAAAGCCTTTCATGATT ATAGTGCAGCAGCTGCCCGAGCCCCGTGCTTGGCAACATTCCCCCCAACGATGGGATGCCGGGAGGCCCCATCC GCATGATGGGACCCCACAGTCAGCCTCCGGGAGGAGTTCTTGGGACACAGCCATTGCTGCCCAATTCTATGGATC CCACACGACAACAAGGCCACCCCAACATGGGAGGATCAATGCAGAGAATGAACCCTCCCCGAGGCATGGGGCCCA TGGGTCCCGGCCCACAGAATTACGGCAGCGGCATGAGACCACCACCCAACTCCCTCGGCCCGCCATGCCCGGGAT TAACATGGGCCCGGGAGCTGGCAGACCCTGGCCCAATCCTAACAGTGCTAACTCAATTCCATATTCCTCCTCATC ACCTGGTACCTATGTGGGACCCCCGGTGGTGGCGCCCTCCAGGAACACCCATTATGCCCAGTCCCGCAGATTCA ACAAATTCCAGTGACAACATCTACACAATGACCTGGCGGCAGGTCCAACTTCCCGATGGGTCCCGGCTCGGACGG TCCGATGGCCGCATGGGTGGCATGGACCACACCACATGAATGGATCATTAGGGTCAGGCGACATAGACGGACT TCCAAAAAATTCTCCTAACAACATAAGTGGCATTAGCAATCCTCCAGGCACCCCTCGAGATGACGGCGAGCTAGG AGGGAGCTTCCTCCACTCCTTTCAGAATGACAATTATTCTCCAAGCATGACGATGAGTGTGTGATCCCCCCTTCT CCGAGACGCTGAGAGACCCGCATTGCAGGCGGGAAGACCCCAGAAATTATGCAAGAAGTGAGGTGTTATTATCC AGGAGCTGGTGGGGAGGCATCTCCCTGCTCCCCTAAACCCCCTCCCACCCCATCCACGCCCCCTACCTTTCCCA ATTTTAGTTTCATGCAATAAAAAGGCCAAACTTTTTATTCCATAAAAC

GGCGGGTTCGCGCCCCGAAGGCTGAGAGCTGGCGCTGCTCGTGCCCTGTGTGCCAGACGGCGGAGCTCCGCGGCC GGACCCCGCGCCCCGCTTTGCTGCCGACTGGAGTTTGGGGGGAAGAAACTCTCCTGCGCCCCAGAGGATTTCTTC AGAGGGCAGTGCCATGTTCCTCCCATCCTAGTGGCGCTGTGCCTGTGGCTGCACCTGGCGCTGCGCGGG CGCGCCCTGCGAGGCGGTGCGCATCCCTATGTGCCGGCACATGCCCTGGAACATCACGCGGATGCCCAACCACCT GCACCACAGCACGCAGGAGAACGCCATCCTGGCCATCGAGCAGTACGAGGAGCTGGTGGACGTGAACTGCAGCGC $\tt CGTGCTGCGCTTCTTCCTCTGTGCCATGTACGCGCCCCATTTGCACCCTGGAGTTCCTGCACGACCCTATCAAGCC$ GTGCAAGTCGGTGTGCCAACGCGCGCGCGACGACTGCGAGCCCCTCATGAAGATGTACAACCACAGCTGGCCCGA AAGCCTGGCCTGCGACGAGCTGCCTGTCTATGACCGTGGCGTGTGCATCTCGCCTGAAGCCATCGTCACGGACCT $\tt CTATGTTATTCATGCCAAAATAAAAGCTGTGCAGAGGAGTGGCTGCAATGAGGTCACAACGGTGGTGGATGTAAA$ AGAGATCTTCAAGTCCTCATCACCCATCCCTCGAACTCAAGTCCCGCTCATTACAAATTCTTCTTGCCAGTGTCC ACACATCCTGCCCCATCAAGATGTTCTCATCATGTGTTACGAGTGGCGCTCAAGGATGATGCTTCTTGAAAATTG AACAGTTCAGGACAAGAAGAAAACAGCCGGGCGCACCAGTCGTAGTAATCCCCCCAAACCAAAGGGAAAGCCTCC TGCTCCCAAACCAGCCAGTCCCAAGAAGAACATTAAAACTAGGAGTGCCCAGAAGAGAACAAACCCGAAAAGAGT GTGAGCTAACTAGTTTCCAAAGCGGAGACTTCCGACTTCCTTACAGGATGAGGCTGGGCATTGCCTGGGACAGCC TATGTAAGGCCATGTGCCCCTTGCCCTAACAACTCACTGCAGTGCTCTTCATAGACACATCTTGCAGCATTTTTC TTAAGGCTATGCTTCAGTTTTTCTTTGTAAGCCATCACAAGCCATAGTGGTAGGTTTGCCCTTTGGTACAGAAGG TTTTTTTTACAGTATGTTTATTACCTTTTGATATCTGTTGTTGCAATGTTAGTGATGTTTTAAAATGTGATCGAA GGATTTTTGTGATGAAAGGGGGATTTTTTGAAAAATCTAGAGAAGTAGCATATGGAAAACTATAATGTGTCTTTTT GAGAGGCAGACAATGTCTGGATTCCTGTTTTTTGGTTACCTGATTTCATGATCATGATGCTTCTTGTCAACACCC TCTTAAGCAGCACCAGAAACAGTGAGTTTGTCTGTACCATTAGGAGTTAGGTACTAATTAGTTGGCTAATGCTCA AGTATTTTATACCCACAAGAGAGGTATGTCACTCATCTTACTTCCCAGGACATCCACCCTGAGAATAATTTGACA AGCTTAAAAATGGCCTTCATGTGAGTGCCAAATTTTGTTTTCTTCATTTAAATATTTTCTTTGCCTAAATACATG TGAGAGGAGTTAAATATAAATGTACAGAGGAAAGTTGAGGTTCCACCTCTGAAATGAGAATTACTTGACAGTT GGGATACTTTAATCAGAAAAAAAAAGAACTTATCTTGCAGCATTTTATCAACAAATTTCATAATTGTGGACAATTGG AGGCATTTATTTTAAAAAACAATTTTATTGGCCTTTTGCTAACACAGTAAGCATGTATTCTCTATAAGGCATTCA ATAAATGCACAACGCCCAAAGGAAATAAAATCCTATCTAATCCTACTCTCCACTACACAGAGGTAATCACTATTA GTATTTTGGCATATTATTCTCCAGGTGTTTCTTATGCACTTATAAAATGATTTGAACAAATAAAACTAGGAACCT GCTATACATGTGTTTCATAACCTGCCTCCTTTGCTTGGCCCTTTATTGAGATAAGTTTTCCTGTCAAGAAAGCAG AAACCATCTCATTTCTAACAGCTGTTTTTTTTCCATAGTATGCATTACTCAACAAACTGTTGTGCTATTGGATA CTTAGGTGGTTTCTTCACTGACAATACTGAATAAACATCTCA

2456/6881 FIGURE 2259A

CCACGCTGGGCGACAGAGCCTCCAGTTCCCCTTCAATGGTGGCGGGTCGCCGGAGCTCTGATCGCCGGGAACCCT TGCCGCTGCTGTCCTGCGACCCCAAGCAGGTATAGACACGTGTGGCCGTTTACGCTGTAGGATCCTCATTCCCAC TGGCTTTGAACATTTTGGGGACTTACAATGCCGCCACCCGCGGACATCGTCAAGGTGGCCATAGAATGGCCGGGC GCCTACCCCAAACTCATGGAAATTGATCAGAAAAAACCACTGTCTGCAATAATAAAGGAAGTCTGTGATGGGTGG TCTCTTGCCAACCATGAATATTTTGCACTCCAGCATGCCGATAGTTCAAACTTCTATATCACAGAAAAGAACCGC AATGAGATAAAAAATGGCACTATCCTTCGATTAACCACATCTCCAGCTCAGAACGCCCAGCAGCTCCATGAACGA ATCCAGTCCTCGAGTATGGATGCCAAGCTGGAAGCCCTGAAGGACTTGGCCAGCCTCTCCCGGGATGTCACGTTT GCCCAGGAGTTTATAAACCTGGACGGTATCTCTCTCCTCACGCAGATGGTGGAGAGCGGCACTGAGCGATACCAG AAATTGCAGAAGATCATGAAGCCTTGCTTTGGAGACATGCTGTCCTTCACCCTGACGGCCTTCGTCGAGCTGATG GACCATGGCATAGTGTCCTGGGATACATTTTCGGTGGCGTTCATTAAGAAGATAGCAAGTTTTGTGAACAAGTCA GCCATAGACATCTCGATCCTGCAGCGGTCCTTGGCCATTTTTGGAGTCGATGGTGCTCAATAGCCATGATCTCTAC CAGAAAGTGGCGCAGGAGATCACCATCGGCCAGCTCATTCCACACCTGCAAGGGTCAGATCAAGAAATCCAAAACC TATACTATTGCAGTGATTAATGCGCTTTTCCTGAAGGCTCCTGATGAGAGGAGGAGGAGATGGCGAATATTTTG GCTCAGAAGCAACTGCGTTCCATCATTTTAACACATGTCATCCGAGCCCAGCGGGCCATCAACAATGAGATGGCG CACCAGCTGTATGTTCTACAAGTGCTCACCTTTAACCTCCTGGAAGACAGGATGATGACCAAAATGGACCCCAG GACCAGGCTCAGAGGACATCATATTTGAACTTCGAAGAATTGCTTTTGATGCTGAGTCTGAACCTAACAACAGC AGTGGCAGCATGGAGAAACGCAAGTCCATGTACACGCGAGATTATAAGAAGCTTGGGTTCATTAATCATGTCAAC CCTGCCATGGACTTCACGCAGACTCCACCTGGGATGTTGGCTCTGGACAACATGCTGTACTTTGCCAAGCACCAC CAAGATGCCTACATCCGGATTGTGCTTGAGAACAGTAGTCGAGAAGACAAGCATGAATGTCCCTTTGGCCGCAGT AGTATAGAGCTGACCAAGATGCTATGTGAGATCTTGAAAGTGGGCGAGTTGCCTAGTGAGACCTGCAACGACTTC CACCCGATGTTCTCACCCACGACAGATCCTTTGAGGAGTTTTTCTGCATCTGTATCCAGCTCCTGAACAAGACA TGGAAGGAAATGAGGCAACTTCTGAAGACTTCAACAAGGTAATGCAGGTGGTGAAGGAGCAGGTTATGAGAGCA CTTACAACCAAGCCTAGCTCCCTGGACCAGTTCAAGAGCAAACTGCAGAACCTGAGCTACACTGAGATCCTGAAA CCAGAAATCTTAGAGCTGATCAAACAGCAACGCCTGAACCGCCTTGTGGAAGGGACCTGCTTTAGGAAACTCAAT GCCCGGCGGAGGCAAGACAAGTTTTGGTATTGTCGGCTTTCGCCAAATCACAAAGTCCTGCATTACGGAGACTTA GAAGAGAGTCCTCAGGGAGAAGTGCCCCACGATTCCTTGCAGGACAAACTGCCGGTGGCAGATATCAAAGCCGTG GTGACGGGAAAGGACTGCCCTCATATGAAAGAGAAAGGTGCCCTTAAACAAAACAAGGAGGTGCTTGAACTCGCT TTCTCCATCTTGTATGACTCAAACTGCCAACTGAACTTCATCGCTCCTGACAAGCATGAGTACTGTATCTGGACG GATGGACTGAATGCGCTACTCGGGAAGGACATGATGAGCGACCTGACGCGGAATGACCTGGACACCCTGCTCAGC ATGGAAATCAAGCTCCGCCTCCTGGACCTGGAAAACATCCAGATCCCTGACGCACCTCCGCCGATTCCCAAGGAG CCCAGCAACTATGACTTCGTCTATGACTGTAACTGAAGTGGCCGGGCCCAGACATGCCCCTTCCAAAACTGGAAC ACCTAGCTAACAGGAGAGAGGAATGAAAACACACCCACGCCTTGGAACCGTCCTTTGGTAAAGGGAAGCTGTGGG TCCACATTCCCTTCAGCATCACCTCTAGCCCTGGCAACTTTCAGCCCCTAGCTGGCATCTTGCTCACCGCCCTGA ${\tt TTCTGTTCCTCGGCTCCACTGCTTCAGGTCACTTCCCATGGCTGCAGTCCACTGGTGGGACAAGAGCCAAAGCCCA}$ AGCCAGCAGCCCCAGACTGCCCAAAAACTTGCCCACCAGACCAAGGGCAGTGCCCCAAGGCCCCTGTCTGGAGGA AATGGCCTAGCTATTTGATGAGAAGACCAAACCCCACATCCTCCTTTCCCCTCTCTAGAATCATCTCGCACCA CCAGTTACACTTGAATTAAGATCTGCGCTCAAATCTCCTCCCACCTCTCTCCCTGCTTTTGCCTTGCTCTGTTCC TCTTTGGTCCCAAGAGCAGCAGCCGCAGCCTCCTCGTGATCCTCCCTAGCATAAATTTCCCAAACAGTCCACAGG TCCCATGCCCACTTTGCGTCTGCACTGTGATCGTGACAAATCTTCCCTCCTCACCAGCTAGTCTGGGGTTTCCTC TTTGGTGTTACCTTCTCCTGGGAGGTCCTGCTGCAACTCAAGTTCCACAGGATGGTCAAGCTGTCAGACATCCAA GTGTGAATTTCCAGTTTTTTTTTAATTATTTTTAATCCCAAACATCTTCCTGAAAATAACATTCCCTTAAACATGC

WO 2004/030615 PCT/US2003/028547

2457/6881 FIGURE 2259B

FIGURE 2260

CATTTAAAGGTGTGCGGCGGGTCTCTGTTCACATGGCTCAACTGGAAACCTGTTTCATGAACAAGCTTACTCAGG AACCATCTGGTGGTATTCCAGCACATTGTTCTTCAGGGGGACGACTCTAAGTCGCTTTGTGGTGGCAGCAGCTTA GAATCAGTATTTGTGGTTGGGAAAGATGGACTTACGGGAGCTTGGTA<u>ATG</u>CAGGTGGTGAAGGAGCAGGTTATGA GAGCACTTACAACCAAGCCTAGCTCCCTGGACCAGTTCAAGAGCAAACTGCAGAACCTGAGCTACACTGAGATCC TTCAGCCAGAAATCTTAGAGCTGATCAAACAGCAACGCCTGAACCGCCTTGTGGAAGGGACCTGCTTTAGGAAAC ${\tt TCAATGCCCGGCGGAGGCAAGACAAGTTTTGGTATTGTCGGCTTTCGCCAAATCACAAAGTCCTGCATTACGGAG}$ ACTTAGAAGAGGTCCTCAGGGAGAAGTGCCCCACGATTCCTTGCAGGACAAACTGCCGGTGGCAGATATCAAAG $\verb|CCGTGGTGACGGGAAAGGACTGCCCTCATATGAAAGAGAAAGGTGCCCTTAAACAAAACAAGGAGGTGCTTGAAC| \\$ TCGCTTTCTCCATCTTGTATGACTCAAACTGCCAACTGAACTTCATCGCTCCTGACAAGCATGAGTACTGTATCT GGACGGATGGACTGAATGCGCTACTCGGGAAGGACATGATGAGCGACCTGACGCGGAATGACCTGGACACCCTGC TCAGCATGGAAATCAAGCTCCGCCTCCTGGACCTGGAAAACATCCAGATCCCTGACGCACCTCCGCCGATTCCCA AGGAGCCCAGCAACTATGACTTCGTCTATGACTGTAACTGAAGTGGCCGGGCCCAGACATGCCCCTTCCAAAACT GGAACACCTAGCTAACAGGAGAGAGGAATGAAAACACACCCACGCCTTGGAACCGTCCTTTGGTAAAGGGAAGCT GTGGGTCCACATTCCCTTCAGCATCACCTCTAGCCCTGGCAACTTTCAGCCCCTAGCTGGCATCTTGCTCACCGC CCTGATTCTGTTCCTCGGCTCCACTGCTTCAGGTCACTTCCCATGGCTGCAGTCCACTGGTGGGACAAGAGCAAA AGGAAAGCCAGCAGCCCAGACTGCCCAAAAACTTGCCCACCAGACCAAGGGCAGTGCCCCAAGGCCCCTGTCTG GAGGAAATGGCCTAGCTATTTGATGAGAAGACCAAACCCCACATCCTCCTTTCCCCTCTCTAGAATCATCTCG CACCACCAGTTACACTTGAATTAAGATCTGCGCTCAAATCTCCTCCCACCTCTCTCCCTGCTTTTGCCTTGCTCT GTTCCTCTTTGGTCCCAAGAGCAGCAGCCGCAGCCTCCTCGTGATCCTCCCTAGCATAAATTTCCCAAACAGTCC ACAGGTCCCATGCCCACTTTGCGTCTGCACTGTGATCGTGACAAATCTTCCCTCCTCACCAGCTAGTCTGGGGTT TTGCTTTGTTTTTGGACAAAAGAGTCTAACATTTTTTGCCAAACAGATATATTTTAATGAAAAGAGAGATACA TAAATGTGTGAATTTCCAGTTTTTTTTTAATTATTTTAATCCCAAACATCTTCCTGAAAATAACATTCCCTTAAA

MQVVKEQVMRALTTKPSSLDQFKSKLQNLSYTEILKIRQSERMNQEDFQSRPILELKEKIQPEILELIKQQRLNR LVEGTCFRKLNARRRQDKFWYCRLSPNHKVLHYGDLEESPQGEVPHDSLQDKLPVADIKAVVTGKDCPHMKEKGA LKQNKEVLELAFSILYDSNCQLNFIAPDKHEYCIWTDGLNALLGKDMMSDLTRNDLDTLLSMEIKLRLLDLENIQ IPDAPPPIPKEPSNYDFVYDCN

GCACCCGGCAGCGTCTCAGGCCAAGCCCCCTGCCAGCATCGCCAGCGAGTTCAAGAAGAAGCTCTTCTGGAGGG CAGTGGTGGCCGAGTTCCTGGCCACGACCCTCTTTGTCTTCATCAGCATCGGTTCTGCCCTGGGCTTCAAATACC CGGTGGGGAACAACCAGACGGCGGTCCAGGACAACGTGAAGGTGTCGCTGGCCTTCGGGCTGAGCATCGCCACGC TGGCGCAGAGTGTGGGCCACATCAGCGGCGCCCACCTCAACCCGGCTGTCACACTGGGGGCTGCTCAGCTGCC AGATCAGCATCTTCCGTGCCCTCATGTACATCATCGCCCAGTGCGTGGGGGCCCATCGTCGCCACCGCCATCCTCT CAGGCATCACCTCCCTGACTGGGAACTCGCTTGGCCGCAATGACCTGGCTGATGGTGTGAACTCGGGCCAGG ACCTTGGTGGCTCAGCCCCCCTTGCCATCGGCCTCTCTGTAGCCCTTGGACACCTCCTGGCTATTGACTACACTG GGGTGGGGCCATTCATCGGGGGGGCCCTGGCTGTACTCATCTACGACTTCATCCTGGCCCCACGCAGCAGTGACC TCACAGACCGCGTGAAGGTGTGGACCAGCGGCCAGGTGGAGGAGTATGACCTGGATGCCGACGACATCAACTCCA GGGAGGGGGGGGGGAAATCCATACTGTAGACACTCTGACAAGCTGGCCAAAGTCACTTCCCCAAGATCTGCCAG TAGTCGCCCCTCAGAGCATGATGGGAGGTGTGCCAGAAAGTCCCCCCTCGCCCCAAAGTTGCTCACCGACTCACC TGCGCAAGTGCCTGGGATTCTACCGTAATTGCTTTGTGCCTTTGGGCAGGCCCTCCTTCTTTTCCTAACATGCAC CTTGCTCCCAATGGTGCTTGGAGGGGGAAGAGATCCCAGGAGGTGCAGTGGAGGGGGGAAGCTTTGCTCCTTCAG TTCTGCTTGCTCCCAAGCCCCTGACCCGCTCGGACTTACTGCCTGACCTTGGAATCGTCCCTATATCAGGGCCTG AGTGACCTCCTTCTGCAAAGTGGCAGGGACCGGCAGAGCTCTACAGGCCTGCAGCCCCTAAGTGCAAACACAGCA TGGGTCCAGAAGACGTGGTCTAGACCAGGGCTGCTCTTTCCACTTGCCCTGTGTTCTTTCCCCAGGGGCATGACT GTCGCCACACGCCTCTGCATATATGTCTCTTTGGAGTTGGAATTTCATTATATGTTAAGAAAATAAAGGAAAATG ACTTGTAAGGTC

MASEFKKKLFWRAVVAEFLATTLFVFISIGSALGFKYPVGNNQTAVQDNVKVSLAFGLSIATLAQSVGHISGAHL NPAVTLGLLLSCQISIFRALMYIIAQCVGAIVATAILSGITSSLTGNSLGRNDLADGVNSGQGLGIEIIGTLQLV LCVLATTDRRRRDLGGSAPLAIGLSVALGHLLAIDYTGCGINPARSFGSAVITHNFSNHWIFWVGPFIGGALAVL IYDFILAPRSSDLTDRVKVWTSGQVEEYDLDADDINSRVEMKPK

2462/6881 FIGURE 2264A

TCAGTCCCCGTGCACAGACCTGCACAAATGGCTGAGCCTCATCATTCCTGACAGCGAGGAGATCTTGGATGTGCC AGGCCTAGTGAAAGACCAACAATCTCACTGCAGGGCCCCGCCAGGCAAGGGAAGGGAGGTTCTTGCCGCGCC GACGCCGCCGTCGCCACGGCAACGCGGCCATACTGCGCCGGACAGACCCAGTTGCCTGGTGCTGCGGCCCGGCGT GGAGTTCCTCAGCAGAAAGGGCTTAAAGAAGACATGTGTGACCATGGACCAGGAACGCCCACGCTCTGACCTCAG CATAAACAACAGAAATGATCTTCGAAAGGTTTTGCATCTTGAATTTCTCTATAAGGAGAACAAGGCAAAGGAAAA TCCTCTAAAAACAAGCCTTGAACTCATCACCAGATACTTTCTGGATCACTTTGGAAATACGGCTAACAATTTCAC TCAAGATACCCCAATCCCTGCACTCTCAGTTCCAAAGAAAAATAACAAAGTGCCATCAAGATGCTCAGAGACTAC ACTGGTAAATATATATGACCTTTCAGATGAAGATGCAGGATGGAGAACATCATTGTCAGAAACAAGCAAAGCCAG ACATGACAATCTTGATGGAGATGTACTTGGTAATTTTGTATCATCTAAAAGGCCCCCGCACAAAAGTAAGCCCAT GCAGACGGTCCCGGGTGAAACTCCTGTGTTGACTTCTGCATGGGAGAAGATAGACAAGCTTCACTCGGAGCCTTC CTTGGATGTGAAGAGGATGGGAGAAATTCCAGGCCAAAGTCTGGTCTGATTGTGCGAGGCATGATGTCTGGGCC CATCGCCAGCTCCCCACAGGTGAGGAAATCAGGGACAGAGAAGTTAAGCAGCTTGCCACAGGTGACACAGTTGGT AGGTGGTGATGCAGACTGGAGCGACGGCTTCACCTGCTGCATGAACCTGCTCTCTGATTCTTTTCACAGACACTA TCTGAGACGGTCCTCACCGTCAAGCAGCTCCACCCAACCCCAAGAAGAGAGCCGGAAGGTCCCTGAGCTCTTTGT $\tt CTGCACCCAACAGGACATTCTGGCTTCGAGCAACAGCTCCCCTCCAGGACCTCCCTGGGTCAGCTTAGTGAACT$ GACCGTAGAAAGGCAGAAAACCACTGCCAGCAGCCCTCCCCATCTGCCCAGCAAACGGCTGCCCCCATGGGACAG GGCCAGGCCGAGGATCCCTCCGAGGACACCCCAGCAGTGGACGGCAGCACAGACACGGACAGGATGCCCTTGAA GCCCGCACCTGTCAGGTATTACAGTAAAGATAAACTGCAAAGCCTGTCCCTGGATATCACCTTAGATGCATTGGA TGCCCTGGGGGGAAAGTTTGCTGGTATCCCTGGGGTCTCATTCCTAAAGACTGAAGCAGCTCTCTTGTTCTTCCC CAGCGTGTTTTTCTACGGCCTGCATTGGGTTTTGCTGCATTTTGCAGACATTTTTGGATAATGTACACTTATGGAA AAATCAGTTGCTGCCGTCTGACAAGGTGGATGGTGAGCTGGGTGCCCTGCGGCTCGAGGATGTGGAGGATGAGTT GATAAGGGAAGAGGTCATCCTGTCGCCAGTCCCATCAGTGCTCAAGTTGCAGACAGCATCAAAACCAATTGACCT CTCAGTAGCAAAGGCACTTCAGATGTGGCTGGTGCAGCAAGAGCTGGGGAATAAGACCCTCTGCTTTGGAGATGT TAAAATTGAACATGGATTTAAGGAGCACTTGCTTCCCACTAGCCTTTGCCAATGTGTCCCAGGAGTCAGATCCTG TGCTAAGCCCCGTGATGCCTACAGAGATGAGCTCCTCAAGAAGCCTCTGCACCACAGGGGTGGTCCTTGCGGAGT CCTGGCAGCTGTCCAAGGCTGTCCTACAGAAACTCCTGTTTGAAGGAGATAGCAAAGCCGACTGTGCTCAGGG ACTGCAGCCTTCAGATGCCCACCGGACCCGCTGCCTCGTCCTGGCCCTCGCAGACATTGTGTGGCGGGCAGGGGG CCGAGAGAGAGCCGTTGTTGCACTGGCTTCGAGAACACAGCAGTTCAGTCCAACAGGGAAATACAAAGCAGATGG AGTCTTAGAAACACTTACGCTTCACAGTTTGACCTGCTATGAGGACCTGGTGACTTTTCTTCAACAAAGCATTCA TCAGAACTTTCCCAAAGACCCTGAAGGCCTGGGCACAGCCCTGGGAAATGATCAGGCCCTGGCAGCACCAGATGT ${\tt CCCTTGGGTAGGCAATGGGGCCTACCCTAGGAACAAAAGGAGGCAGTTTGAAGTGGGCCCCTATGGCTGCATCCT}$ GCTCACCCTTTCTGCCATCCTGTCCAGGTCTACAGAGCTGGGCCTCTGCTGTGGATTCGGGGGAGGACAGTGGGG GCTCTGTGGCCTCGTGCCGCCAGGCTGCCTGCTTGCTGCTTCTGACCTTATTAAATGCGTACCAGAGCCAGGG TGAGGACATCATGGACAGATGTAAACCTAGCCGAGTGCTGCCGACCACTGCCTGGCCACTTCATTGTCAGA GGCCCCAAGAAGAGTCGAGAACAGACCTTTGAGGGAGCTCTCACAAGCCCCCAAGGATGCTCAGGGTCCTGGGGT CAGGACAGCTCTGAACCAGACCTGGGCAGCACTGAGCATGGGCTGCTCTGGTGCCTCAGTGGAGCACAGACCTGG CCAGGTCATTGAGGCCCTGAGAAGGGTCCAGTGTGACCCCCAGGGCCGTGTGTGCCCCCAGGGTTGTGTACCC ${\tt CCCTGGGTCAGGGGCCCTCAATGGACCTCACAGGGGCAAAGAAGACCCTGAGCACAGTTGCTTGTCATCAGTCCT}$ CTCAGTCACCCAGGAACTTGTCAATCTGCTCCTGACTGGGAAAGCTGTGTCCAACGTTTTCAACGATGTGGTTGA GCTGGATTCTGGGGATGGGAACATCACACTTCTCAGAGGCATTGCTGCACGCAGTGATATTGGCTTCTTATCTCT CTTTGAGCATTACAACATGTGCCAGGTTGGCTGCTTCCTGAAGACCCCGAGGTTCCCCATCTGGGTGGTTTGCAG TGAGAGCCACTTCAGCATCCTCTTTAGCCTGCAGCCGGGGCTCCTGCGTGACTGGAGGACTGAGAGGCTCTTTGA CTTGTACTACGATGGCCTGGCCAACCAGCAGGAGCAGATCCGGCTGACCATTGACACCACCCAAACCATCTC TGAGGACACAGACAACGACCTTGTCCCACCCCTCGAGCTCTGCATCAGAACCAAGTCTGTGTTCCATGTCTGCGA GAACTTTGCTGACACCAGCTGCCTGTTCCACTTCCCCCATCATCCCCCATCATGGTGGGTCCACCTTGGC AGTTGTTCCTAGAAAAGCTGAGTGGGCTCTATCAGGCACCTTTTTCCCCATGAAAAACACTGGGTCCATCAACGT

2463/6881 FIGURE 2264B

GTCACTCGTATAAAAACCTATGCTTTGAAGGTTCTCGTGTGTCTCGGCCTGCAGGTCTCGCTCAGAGCTGTGTCC CTCCCGAACCGGAGAAAACCTTCGGCGGGGTCCTTCCGGGTTTTGTGTCGAATCTGCGGCGGCGACCCGGCGCGC CGTCACGCGGTGGTGAATGTGCGGCAGTACGCGCGCGCGTCGTTTACGCGGCGATTTCATCATGCTCCGAGCCG GCGGCGCGCGCCGCTCCGCCACCCTCTCTGGACAGCCCAGGGCCGCAGGCTCATGCCCTCTCCGCGTCCAG TGCTGCTTAGAGGTGCTCGCGCCGCTCTGCTGCTGCTGCCGCCCCGGCTCTTAGCCCGACCCTCGCTCCTCC ${\tt TCCGCCGGTCCCTCAGCGCGGCCTCCTGCGCCCCGATCTCCTTGCCCGCCGCCGCCTCCCGGAGCAGC} \underline{{\tt ATG}}{\tt GACG}$ GCGCGGGGGCTGAGGAGGTGCTGGCACCTCTGAGGCTAGCAGTGCGCCAGCAGGGAGATCTTGTGCGAAAACTCA AAGAAGATAAAGCACCCCAAGTAGACGTAGACAAAGCAGTGGCTGAGCTCAAAGCCCGCAAGAGGGTTCTGGAAG CAAAGGAGCTGGCGTTACAGCCCAAAGATGATATTGTAGACCGAGCAAAAATGGAAGATACCCTGAAGAGGAGGT TTTTCTATGATCAAGCTTTTGCTATTTATGGAGGTGTTAGTGGTCTGTATGACTTTGGGCCAGTTGGCTGTGCTT TGAAGAACAATATTATTCAGACCTGGAGGCAGCACTTTATCCAAGAGGAACAGATCCTGGAGATCGATTGCACCA TGCTCACCCCTGAGCCAGTTTTAAAGACCTCTGGCCATGTAGACAAATTTGCTGACTTCATGGTGAAAAGACGTAA AAAATGGAGAATGTTTTCGTGCTGACCATCTATTAAAAGCTCATTTACAGAAATTGATGTCTGATAAGAAGTGTT CTGTCGAAAAGAAATCAGAAATGGAAAGTGTTTTGGCCCAGCTTGATAACTATGGACAGCAAGAACTTGCGGATC TTTTTGTGAACTATAATGTAAAATCTCCCATTACTGGAAATGATCTATCCCCTCCAGTGTCTTTTAACTTAATGT TCAAGACTTTCATTGGGCCTGGAGGAAACATGCCTGGGTACTTGAGACCAGAAACTGCACAGGGGATTTTCTTGA ATTTCAAACGACTTTTGGAGTTCAACCAAGGAAAGTTGCCTTTTGCTGCTGCCCAGATTGGAAATTCTTTTAGAA ATGAGATCTCCCCTCGATCTGGACTGATCAGAGTCAGAGAATTCACAATGGCAGAAATTGAGCACTTTGTAGATC CCAGTGAGAAAGACCACCCCAAGTTCCAGAATGTGGCAGACCTTCACCTTTATTTGTATTCAGCAAAAGCCCAGG TCAGCGGACAGTCCGCTCGGAAAATGCGCCTGGGAGATGCTGTTGAACAGGGTGTGATTAATAACACAGTATTAG GCTATTTCATTGGCCGCATCTACCTCTACCTCACGAAGGTTGGAATATCTCCAGATAAACTCCGCTTCCGGCAGC ACATGGAGAATGAGATGGCCCATTATGCCTGTGACTGTTGGGATGCAGAATCCAAAACATCCTACGGTTGGATTG AGATTGTTGGATGTGCTGATCGTTCCTGTTATGACCTCTCCTGTCATGCACGAGCCACCAAAGTCCCACTTGTAG CTGAGAAACCTCTGAAAGAACCCAAAACAGTCAATGTTGTTCAGTTTGAACCCAGTAAGGGAGCAATTGGTAAGG CATATAAGAAGGATGCAAAACTGGTGATGGAGTATCTTGCCATTTGTGATGAGTGCTACATTACAGAAATGGAGA TGCTGCTGAATGAGAAAGGGGAATTCACAATTGAAACTGAAGGGAAAACATTTCAGTTAACAAAAGACATGATCA GTAGGATCATGTATACGGTATTTGAACATACATTCCATGTACGAGAAGGAGATGAACAGAGAACATTCTTCAGTT TCCCTGCTGTAGTTGCTCCATTCAAATGTTCCGTCCTCCCACTGAGCCAAAACCAGGAGTTCATGCCATTTGTCA AGGAATTATCGGAAGCCCTGACCAGGCATGGAGTATCTCACAAAGTAGACGATTCCTCTGGGTCAATCGGAAGGC GCTATGCCAGGACTGATGAGATTGGCGTGGCTTTTGGTGTCACCATTGACTTTGACACAGTGAACAAGACCCCCC ACACTGCAACTCTGAGGGACCGTGACTCAATGCGGCAGATAAGAGCAGAGATCTCTGAGCTGCCCAGCATAGTCC AAGACCTAGCCAATGGCAACATCACATGGGCTGATGTGGAGGCCAGGTATCCTCTGTTTGAAGGGCAAGAGACTG CTACTCTTATGTCCACTTTACAAAAGAAAACAGCATTGTGATTACTCCCAGGGACCGTATTTTATCTTCAGTGGC TGCCTGATTTTACCCCCACAATTAAAGTTGAAGGAATCCTGA

MDGAGAEEVLAPLRLAVRQQGDLVRKLKEDKAPQVDVDKAVAELKARKRVLEAKELALQPKDDIVDRAKMEDTLK RRFFYDQAFAIYGGVSGLYDFGPVGCALKNNIIQTWRQHFIQEEQILEIDCTMLTPEPVLKTSGHVDKFADFMVK DVKNGECFRADHLLKAHLQKLMSDKKCSVEKKSEMESVLAQLDNYGQQELADLFVNYNVKSPITGNDLSPPVSFN LMFKTFIGPGGNMPGYLRPETAQGIFLNFKRLLEFNQGKLPFAAAQIGNSFRNEISPRSGLIRVREFTMAEIEHF VDPSEKDHPKFQNVADLHLYLYSAKAQVSGQSARKMRLGDAVEQGVINNTVLGYFIGRIYLYLTKVGISPDKLRF RQHMENEMAHYACDCWDAESKTSYGWIEIVGCADRSCYDLSCHARATKVPLVAEKPLKEPKTVNVVQFEPSKGAI GKAYKKDAKLVMEYLAICDECYITEMEMLLNEKGEFTIETEGKTFQLTKDMINVKRFQKTLYVEEVVPNVIEPSF GLGRIMYTVFEHTFHVREGDEQRTFFSFPAVVAPFKCSVLPLSQNQEFMPFVKELSEALTRHGVSHKVDDSSGSI GRRYARTDEIGVAFGVTIDFDTVNKTPHTATLRDRDSMRQIRAEISELPSIVQDLANGNITWADVEARYPLFEGQ ETGKKETIEE

FIGURE 2267

MTDAAVSFAKDFLAGGVAEAISKTAVAPIEQVKLLLQAFNFAFKDKYKQIFLGGNLASGGAAGATYLCFVYPLDF ARTCLAANVGKAEAEREFRGLCDCLVKIYKSDGIKGLYQGFNVSMQGIIRAAYFGIYDTAKGMLPDPKDTHIVIS WMTTQTVTAFSGLTSYSFDISGRKVTDIMYTGTLDCWRKIAGDEGGKAFFKGSWSSVLRGMGGAFVLVLFDEIKK YR

CCGGCGTCCGGGCGCGCTGGAGAGGACGCGAGGAGCCATGAGGCGCCAGCCTGCGAAGGTGGCGGCGCTGCTGCT CGGGCTGCTCTTGGAGTGCACAGAAGCCAAAAAGCATTGCTGGTATTTCGAAGGACTCTATCCAACCTATTATAT ATGCCGCTCCTACGAGGACTGCTGTGGCTCCAGGTGCTGTGTGCGGGCCCTCTCCATACAGAGGCTGTGGTACTT CTGGTTCCTTCTGATGATGGGCGTGCTTTTCTGCTGCGGAGCCGGCTTCTTCATCCGGAGGCGCATGTACCCCCC GCCGCTGATCGAGGAGCCAGCCTTCAATGTGTCCTACACCAGGCAGCCCCCAAATCCCGGCCCAGGAGCCCAGCA GCCGGGGCCGCCTATTACACCGACCCAGGAGGACCGGGGATGAACCCTGTCGGGAATTCCATGGCAATGGCTTT $\tt CTGGCCTTCTGTCTTGATGTTCACTTCCAGGAACGGTCTCGTGGGCTGCTAAGGGCAGTTCCTCTGATAT$ CCTCACAGCAAGCACAGCTCTCTTTCAGGCTTTCCATGGAGTACAATATATGAACTCACACTTTGTCTCCTCTGT TGCTTCTGTTTCTGACGCAGTCTGTGCTCTCACATGGTAGTGTGGTGACAGTCCCCGAGGGCTGACGTCCTTACG GGCCAGGCCGAGCATCCCAGGCAAGCATCCTTCTGCCCGGGTATTAATAGGAAGCCCCATGCCGGGCGGCTCAGC CGATGAAGCAGCCGACTGAGCTGAGCCCAGCAGGTCATCTGCTCCAGCCTGTCCTCGTCAGCCTTCCTCT GATAGACTTCTCCTGCACCGCCAGGGAAGGGTAGCACGTGCAGCTCTCACCGCAGGATGGGGCCTAGAATCAGGC CCCAAACTGAGACATTGCATTTTGTGAGCTCTTGGTCTGATTTGGAGAAAGGACTGTTACCCATTTTTTTGGTGT GTTTATGGAAGTGCATGTAGAGCGTCCTGCCCTTTGAAATCAGACTGGGTGTGTCTTCCCTGGACATCACTGC CTCTCCAGGGCATTCTCAGGCCCGGGGGTCTCCTTCCCTCAGGCAGCTCCAGTGGTGGGTTCTGAAGGGTGCTTT GAGGTTGTGTTGGGTCTAAGCGGGTGTGTGCTGGGCTCCAAGGAGGAGGAGCTTGCTGGGAAAAGACAGGAGAAG TACTGACTCAACTGCACTGACCATGTTGTCATAATTAGAATAAAGAAGAAGTGGTCGGAAATGCACATTCCTGGA TAGGAATCACAGCTCACCCCAGGATCTCACAGGTAGTCTCCTGAGTAGTTGACGGCTAGCGGGGAGCTAGTTCCG CCGCATAGTTATAGTGTTGATGTGTGAACGCTGACCTGTCCTGTGTGCTAAGAGCTATGCAGCTTAGCTGAGGCG CCTAGATTACTAGATGTGCTGTATCACGGGGAATGAGGTGGGGGGTGCTTATTTTTAATGAACTAATCAGAGCCT CTTGAGAAATTGTTACTCATTGAACTGGAGCATCAAGACATCTCATGGAAGTGGATACGGAGTGATTTGGTGTCC ATGCTTTTCACTCTGAGGACATTTAATCGGAGAACCTCCTGGGGAATTTTGTGGGAGACACTTGGGAACAAAACA GCCAGCGTGGTACCTCCCATGCTGCAGGCCTCCATCTAAATGAGACAACAAAGCACAATGTTCACTGTTTACAAC TGTAATGAAAAAGCACACTAAGCTGCCCCTGGAATCGGGTGCAGCTGAATAGGCACCCAAAAGTCCGTGACTAAA TTTCGTTTGTCTTTTTGATAGCAAATTATGTTAAGAGACAGTGATGGCTAGGGCTCAACAATTTTGTATTCCCAT GTTTGTGTGAGACAGAGTTTGTTTTCCCTTGAACTTGGTTAGAATTGTGCTACTGTGAACGCTGATCCTGCATAT GGAAGTCCCACTTCGGTGACATTTCCTGGCCATTCTTGTTTCCATTGTGTGGATGGTGGGTTGTGCCCACTTCCT GGAGTGAGACAGCTCCTGGTGTAGAATTCCCGGAGCGTCCGTGGTTCAGAGTAAACTTGAAGCAGATCTGTGC CAAAATAAAATAAATTTGGGCA

MRRQPAKVAALLIGLLIECTEAKKHCWYFEGLYPTYYICRSYEDCCGSRCCVRALSIQRLWYFWFLLMMGVLFCC GAGFFIRRRMYPPPLIEEPAFNVSYTRQPPNPGPGAQQPGPPYYTDPGGPGMNPVGNSMAMAFQVPPNSPQGSVA CPPPPAYCNTPPPPYEQVVKAK

GCCGCTCCTGGTGCTGCTTGTGCTCGTTTGGTGCGGACCTGGTACCTCTTTTGTGAAGTGGCAGCTGAGGAGA CCGGCGCTCGCCATGGCCGACGAAAAGCCCAACCAAGGAGTCAAGTCGGAGAACAACGATCATACTAATTTGAAG GTGGCGGGGCAGGATGGTTCTGTGGTGCAGTTTAAGATTAAGAGGCATACACCACTTAGTAAACTAATGAAAGCC TATTGTAAGCAACAGGGATTGTCAATGAGGCAGATCAGATTCCGATTCGACGGGCAACCAATCAAGGAAACAGAC ACACCTGCACAGTTGGAAATGGAGAATGAAGATACAATTGATGTGTTCCAACAGCAGACGGGAGGTGTCTAC<u>TGA</u>

AAAGGGAACCTGCTTCTTTACTCCAGAACTCTGTTCCTTAAAGACCAAGATTACATTCTCAATTAGTCTTTCATT TCCCCCTTCCCCATTCCTTTATTGTACATAACTGGTATATGTGCACAAGCATATTGCATTTTTTT

 ${\tt MADEKPNQGVKSENNDHTNLKVAGQDGSVVQFKIKRHTPLSKLMKAYCKQQGLSMRQIRFRFDGQPIKETDTPAQLEMENEDTIDVFQQQTGGVY}$

GGAGGAAAATTCTTCCAGCGATGGTCTCCCACTCAGAGCTGAGGAAGCTTTTCTACTCAGCAGATGCTGTGTT TTGATGTTGACAGCACGGTCATCAGAGAAGAAGGAATCGATGAGCTAGCCAAAATCTGTGGCGTTGAGGACGCGG TGTCAGAAATGACACGGCGAGCCATGGGCGGGCAGTGCCTTTCAAAGCTGCTCTCACAGAGCGCTTAGCCCTCA TGGTAAGTCGCCTACAGGAGCGAAATGTTCAGGTTTTCCTAATATCTGGTGGCTTTAGGAGTATTGTAGAGCATG TTGCTTCAAAGCTCAATATCCCAGCAACCAATGTATTTGCCAATAGGCTGAAATTCTACTTTAACGGTGAATATG CAGGTTTTGATGAGACGCCAGCCCAACAGCTGAATCTGGTGGAAAAGGAAAAGTGATTAAACTTTTAAAGGAAAAAT TTCATTTTAAGAAAATAATCATGATTGGAGATGGTGCCACAGATATGGAAGCCTGTCCTCCTGCTGATGCTTTCA TTGGATTTGGAGGAAATGTGATCAGGCAACAAGTCAAGGATAACGCCAAATGGTATATCACTGATTTTGTAGAGC TGCTGGGAGAACTGGAAGAATAACATCCATTGTCGTACAGCTCCAAACAACTTCAGATGAATTTTTACAAGTTAT ACAGATTGATACTGTTTGCTTACAGTTGCCTATTACAACTTGCTATAGAAAGTTGGTACAAATGATCTGTACTTT TTGATTTCCTGGAGAGGTTTTTTTTTTTTTTGAGACAGAATCTTGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCG CGGTCTCGGCTCACTGCAAGCTCTGCCTCCCAGGTTCACGCCATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGA GATGGTCTTGATCTCCTGACCTTGTGATCCGCCTGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCTTGGGCCA ${\tt CCGCGCCCAGCCAATGTCCTAGAGAGTTTTGTGATCTGAATTCTTTATGTATATTTGTAGCTATATTTCATACAA}$ ${\tt AGTGCTTTAAGTGTGGAGAGTCAATTAAACACCTTTACTCTTAGAAATACGGATTCGGCAGCCTTCAGTGAATAT}$ TGGTTTCTCTTTGGTATGTCAATAAAAGTTTATCCGTATGTCAGAACGGATTTGTGG

FIGURE 2274

TCAACATCAGCGCAGCGCGGGGTCTGCAGGACGTGCTAAGGACCAACCTGGGGCCCCAAGGGCACCATGAAGATGC TCGTTTCTGGCGCTGGAGACATCAAACTTACTAAAGACGGCAATGTGCTGCTTCACGAAATGCAAATTCAACACC CAACAGCTTCCTTAATAGCAAAGGTAGCAACAGCCCAGGATGATATAACTGGTGATGGTACGACTTCTAATGTCC TAATCATTGGAGAGCTGCTGAAACAGGCGGATCTCTACATTTCTGAAGGCCTTCATCCTAGAATAATCACTGAAG GATTTGAAGCTGCAAAGGAAAAGGCCCTTCAGTTTTTGGAAGAAGTCAAAGTAAGCAGAGAGATGGACAGGGAAA CACTTATAGATGTGGCCAGAACATCTCTTCGTACTAAAGTTCATGCTGAACTTGCAGATGTCTTAACAGAGGCTG TAGTGGACTCCATTTTGGCCATTAAAAAGCAAGATGAACCTATTGATCTCTTCATGATTGAGATCATGGAGATGA AACATAAATCTGAAACTGATACAAGCTTAATCAGAGGGCTTGTTTTGGACCACGGAGCACGGCATCCTGATATGA AGAAAAGGGTGGAGGATGCATACATCCTCACTTGTAACGTGTCATTAGAGTATGAGAAAACAGAAGTGAATTCTG AAAAAATAATAGAACTGAAAAGGAAAGTCTGTGGCGATTCAGATAAAGGATTTGTTGTTATTAATCAAAAGGGAA TTGACCCCTTTTCCTTAGATGCTCTTTCAAAAGAAGGCATAGTCGCTCTGCGCAGAGCTAAAAAGGAGAAATATGG AGAGGCTGACTCTTGCTTGTGGTGGGGTAGCCCTGAATTCTTTTGACGACCTAAGTCCTGACTGCTTGGGACATG CAGGACTTGTATATGAGTATACATTGGGAGAAGAGAGATTTACCTTTATTGAGAAATGTAACAACCCTCGTTCTG $\tt CTGTCAAAAATGCTATTGATGATGGCTGTGTGTTCCAGGTGCTGGTGCCGTGGAAGTGGCAATGGCAGAAGCCCC$ TGATTAAACATAAGCCCAGTGTAAAGGGCAGGGCACAGCTTGGAGTCCAAGCATTTGCTGATGCATTA TTCCCAAGGTTCTTGCTCAGAACTCTGGTTTTGACCTTCAGGAAACATTAGTTAAAATTCAAGCAGAACATTCAG AATCAGGTCAGCTTGTGGGTGTGGACCTGAACACAGGTGAGCCAATGGTGGCAGCAGAAGTAGGCGTATGGGATA TGCGAGCTGGAATGTCTTCTCTGAAAGGTTGAATTGAAGCTTCCTCTGTATCTGAATCTTGAAGACTGCAAAGTG AGGAGAGACACTGGCATCTGTTGAAATTTGGAAGTTCTGAAATTATAGTATTTTTAAAAATTGCACTGAAGTGT ATACACATAAAGCAGGTCTTTTATCCAGTGAACAGGATGTTTTGCTTTAGCAGCAGTGACATAAAATTCCATGTT AGATAAGCATATGTTACTTACCTTGTTATTAAATATTTCTTGAAAAGCAGGCCACGAAGG

MAAVKTLNPKAEVARAQAALAVNISAARGLQDVLRTNLGPKGTMKMLVSGAGDIKLTKDGNVLLHEMQIQHPTAS LIAKVATAQDDITGDGTTSNVLIIGELLKQADLYISEGLHPRIITEGFEAAKEKALQFLEEVKVSREMDRETLID VARTSLRTKVHAELADVLTEAVVDSILAIKKQDEPIDLFMIEIMEMKHKSETDTSLIRGLVLDHGARHPDMKKRV EDAYILTCNVSLEYEKTEVNSGFFYKSAEEREKLVKAERKFIEDRVKKIIELKRKVCGDSDKGFVVINQKGIDPF SLDALSKEGIVALRRAKRRNMERLTLACGGVALNSFDDLSPDCLGHAGLVYEYTLGEEKFTFIEKCNNPRSVTLL IKGPNKHTLTQIKDAVRDGLRAVKNAIDDGCVVPGAGAVEVAMAEALIKHKPSVKGRAQLGVQAFADALLIIPKV LAQNSGFDLQETLVKIQAEHSESGQLVGVDLNTGEPMVAAEVGVWDNYCVKKQLLHSCTVIATNILLVDEIMRAG MSSLKG

MSIFTPTNQIRLTNVAVVRMKRAGKRFEIACYKNKVVGWRSGVEKDLDEVLQTHSVFVNVSKGQVAKKEDLISAF GTDDQTEICKQILTKGEVQVSDKERHTQLEQMFRDIATIVADKCVNPETKRPYTVILIERAMKDIHYSVKTNKST KQQALEVIKQLKEKMKIERAHMRLRFILPVNEGKKLKEKLKPLIKVIESEDYGQQLEIVCLIDPGCFREIDELIK KETKGKGSLEVLNLKDVEEGDEKFE

GACACTATCCGTGCGGCCAGGCGAGACCCGGAGGACCGAAGCTTCCGGACGACGAGGAACCGCCCAACATGGCC TCGGAGAGTGGGAAGCTTTGGGGTGGCCGGTTTGTGGGTGCAGTGGACCCCATCATGGAGAAGTTCAACGCGTCC ATTGCCTACGACCGGCACCTTTGGGAGGTGGATGTTCAAGGCAGCAAAGCCTACAGCAGGGGCCTGGAGAAGGCA GGGCTCCTCACCAAGGCCGAGATGGACCAGATACTCCATGGCCTAGACAAGGTGGCTGAGGAGTGGGCCCAGGGC ACCTTCAAACTGAACTCCAATGATGAGGACATCCACACCCAATGAGGCGCCGCCTGAAGGAGCTCATTGGTGCA ACGGCAGGGAAGCTGCACACGGGACGGAGCCGGAATGACCAGGTGGTCACAGACCTCAGGCTGTGGATGCGGCAG ${\tt ACCTGCTCCACGCTCTCGGGGCCTCCTCTGGGAGCTCATTAGGACCATGGTGGATCGGGCAGAGGCGGAACGTGAT}$ GTTCTCTTCCCGGGGTACACCCATTTGCAGAGGGCCCAGCCCATCCGCTGGAGCCACTGGATTCTGAGCCACGCC ${\tt GTGGCACTGACCCGAGACTCTGAGCGGCTGCTGGAGGTGCGGAAGCGGATCAATGTCCTGCCCCTGGGGAGGTGG}$ GGCCATTGCAGGCAATCCCCTGGGTGTGGACCGAGAGCTGCTCCGAGCAGAACTCAACTTTGGGGCCATCACTCT ${\tt CAACAGCATGGATGCCACTAGTGAGCGGGACTTTGTGGCCGAGTTCCTGTTCTGGGCTTCGCTGTGCATGACCCA}$ TCTCAGCAGGATGGCCGAGGACCTCATCCTCTACTGCACCAAGGAATTCAGCTTCGTGCAGCTCTCAGATGCCTA TGTGTTTGGGCGGTGTGCCGGGCTCCTGATGACCCTCAAGGGACTTCCCAGCACCTACAACAAAGACTTACAGGA ${\tt GGACAAGGAAGCTGTGTTTGAAGTGTCAGACACTATGAGTGCCGTGCTCCAGGTGGCCACTGGCGTCATCTCTAC}$ GCTGCAGATTCACCAAGAGAACATGGGACAGGCTCTCAGCCCCGACATGCTGGCCACTGACCTTGCCTATTACCT GGTCCGCAAAGGGATGCCATTCCGCCAGGCCCACGAGGCCTCCGGGAAAGCTGTGTTCATGGCCGAGACCAAGGG GGTCGCCCTCAACCAGCTGTCACTGCAGGAGCTGCAGACCATCAGCCCCCTGTTCTCGGGCGACGTGATCTGCGT GTGGGACTACGGGCACAGTGTGGAGCAGTATGGTGCCCTGGGCGCACTGCGCGCTCCAGCGTCGACTGGCAGAT CCGCCAGGTGCGGCGCTACTGCAGGCACAGCAGGCCTAGGTCCTCCCACACCTGCCCCCTAATAAAGTGGGCGC GAG

MASESGKLWGGRFVGAVDPIMEKFNASIAYDRHLWEVDVQGSKAYSRGLEKAGLLTKAEMDQILHGLDKVAEEWA QGTFKLNSNDEDIHTANERRLKELIGATAGKLHTGRSRNDQVVTDLRLWMRQTCSTLSGLLWELIRTMVDRAEAE RDVLFPGYTHLQRAQPIRWSHWILRAIAGNPLGVDRELLRAELNFGAITLNSMDATSERDFVAEFLFWASLCMTH LSRMAEDLILYCTKEFSFVQLSDAYSTGSSLMPQKKNPDSLELIRSKAGRVFGRCAGLLMTLKGLPSTYNKDLQE DKEAVFEVSDTMSAVLQVATGVISTLQIHQENMGQALSPDMLATDLAYYLVRKGMPFRQAHEASGKAVFMAETKG VALNQLSLQELQTISPLFSGDVICVWDYGHSVEQYGALGGTARSSVDWQIRQVRALLQAQQA

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2479/6881 FIGURE 2280

2480/6881 FIGURE 2281A

CGCTTCCTGCGCCTCTTCAGGTCACCGCTTGCTCTAGTTCCCAGGCTTTGGCCTCTAGTGGATGAGAATCACCGA GGCCGGGTAGAGGCTCGAGCCGGGACCCCCGAGCGTGAACCCCGGAGCCAGCGGCGCTGGGGCCAGAGGGGCCAG CGGCCGTCGCTGTACGGTGAGCCCCAGGGAGGCGGATCTGGGCCCCGAGAAGGACACCCGCCTGGATTTGCCCCG TAGGCCCGGCCCGGGCCCTCGGGAGCAGAACAGCCTTGGTGAGGTGGACGGGAGGGGACTTCGCGAGCAGACGC GCGCGCCAGCGACAGCAGCCCCCCCGGCCTCTCGGGAGCCGTGGGGCAGAGGCTGCAGAGCCCCAGGAGGGGGG CAGTGTCATTCAAAGATGTGGCTGTGGATTTCACCCAGGAGGAGTGGTGGCAACTGGACCCTGATGAGAAGATAA CATACGGGGATGTGATGTTGGAGAACTACAGCCATCTAGTTTCCCTGGCTTATGAGGTGGCAACATCTTGTACTT CGGAGATCTGAAGCCGAGCAACTTGCCCAAGTCCTTCTTCTTTTCCCATTAACAAGATATGATATCACCAAGCCA AACGTCATCATTAAGTTGGAGCAGGGAGGGGGGGGGGTGAATTTCCATGTCAACATAGTCCA ACTITACCAAATCGGTTTGTAATAACACCTAGAAGACGCTATCCGATCCATCAGGCCCAGTATTCCTGTCTGGGG GTACTTCCCACCGTGTGCTGGAATGGTTATCACAAGAAGGCTGTGCTGTCCCCTCGCAACTCCAGGATGGTGTGT AGCCCAGTGACTGTGAGGATCGCCCCTCCTGACAGAAGATTTTCGCGTTCTGCGATACCAGAGCAGATAATCAGC TCAACACTGTCCTCACCATCAAGTAACGCCCCAGACCCATGTGCAAAGGAGACAGTACTGAGTGCCCTCAAAGAG AAGGAGAAGAAAGGACAGTGGAGGAAGAAGACCAAATATTCCTTGATGGCCAGGAAAATAAAAAGAAGGCGCCAT GATAGCAGTGGCAGTGGACATTCAGCATTTGAGCCCCTGGTGGCCAATGGAGTCCCCGCTTCTTTTGTGCCTAAG CCTGGGTCTCTGAAGAGGGCCTCAATTCTCAGAGCTCAGATGACCACTTGAATAAGAGATCCCGAAGCTCTTCC ATGAGCTCCTTGACAGGCGCTTACGCAAGTGGCATCCCTAGCTCCAGCCGCAATGCCATTACCAGTTCCTACAGC TCCACTCGAGGCATCTCACAGCTCTGGAAGAGAAATGGCCCCAGTTCATCACCCTTCTCTAGCCCAGCCTCCTCC CGCTCCCAGACACCGGAGAGGCCAGCAAAGAAAATAAGAGAAGAGGAGCTGTGTCATCATTCCAGTTCTTCAACT CCATTGGCAGCAGACAGGGAGTCCCAGGGAGAAAAGGCTGCAGATACAACCCCAAGGAAGAAACAAAACTCGAAT TCTCAGTCTACACCTGGCAGCTCTGGGCAGCGTAAGCGGAAAGTTCAGCTGCCTTCTCGGCGAGGGGAACAG CTGACCTTGCCTCCACCTCCCAGCTTGGCTATTCGATCACTGCCGAGGACCTAGACTTAGAGAAGAAGACTTCA TTACAGTGGTTCAACCAGGCCTTGGAGGACAAGAGCGATGCTGCCTCGAACTCTGTCACTGAGACCCCACCTATC ACCAACCCACTGTTAGAGAGCTTGAAGAAGATGCAGACTCCCCCGAGCCTGCCCACCCTGCCCAGAATCTGCTGGA GCAGCAACCACTGAGGCCCTCTCACCTCCAAAGACACCCAGCCTCCTACCCCCGCTGGGTTTATCACAGTCAGGG CCGCCAGGGCTGCTCCCAGCCCCTCTTTGACTCCAAACCCCCGACCACTTTGCTGGGGCTGATCCCTGCTCCA TCCATGGTACCAGCCACTGACACCAAGGCACCTCCAACCCTTCAGGCAGAGACGGCTACCAAACCCCAAGCCACC TCTGCCCCGTCCCCCCCCCAGCAAGCTTCCTGTTTGGAACACAGAACACCTCACCTTCCAGCCCTGCCGCC ACACCGCCTGGCCCTTCAGTCACAGCCACAGCGCCCTCCAGCTCCTCCCCACGACCACCACCACCACCACACCACAGCC CCGACCTTCCAGCCTGTCTTTAGCAGCATGGGGCCACCTGCATCTGTGCCCTTGCCTGCTCCCTTCTTCAAGCAG ACAACTACTCCCGCCACTGCTCCCACCACAACTGCCCCGCTCTTCACTGGCCTGGCCAGCGCCACCTCTGCTGTG GCTCCCATCACCTCTGCCAGTCCATCCACAGACTCTGCTTCGAAGCCTGCGTTTGGCTTTGGCATAAACAGTGTG AGCAGCAGCAGTGTGAGTACCACGACCAGCACCGCCCACTGCCGCCTCACAGCCTTTCCTCTTCGGGGCGCCCCAG GCCTCTGCTGCCAGCTTCACCCCGGCCATGGGCTCCATATTCCAGTTTGGCAAACCTCCTGCCTTGCCCACAACC ACCACAGTCACCACCTTCAGCCAGTCCCTGCACACTGCCGTGCCAACGGCCACCAGCAGCAGCGCTGCCGACTTT AGCACCCCACGTTCAACATTCCCTTTGGCTCAAGCGCCAAGTCCCCGCTCCCATCATATCCGGGAGCCAACCCC CAGCCCGCATTTGGGGCCGCTGAGGGGCCACCGGGGGCCGCCAAGCCGGCCCTTGCCCCCAGCTTTGGCAGC TCTTTCACTTTTGGAAACTCTGCAGCCCGGCTGCTGCACCCACACCTGCACCTCCGTCCATGATCAAGGTCGTG CCTGCGTACGTGCCTACGCCCATCCATCCTATCTTTGGCGGTGCCACGCACTCGGCGTTTGGGTTGAAAGCCACG GCTTCGGCCTTCGGCGCTCCCGCCAGCTCACAGCCCGCCTTTGGCGGCTCCACTGCTGTCTTCTTCGGTGCAGCC ACCAGCTCCGGCTTTGGAGCCACCACCAGACCGCCAGCAGCAGCAGCAGCAGCTCGGTGTTTGGCAGCACAACA CCATCACCCTTCACGTTTGGGGGTTCGGCAGCCCCCGCTGGCAGTGGGAGCTTTGGGATCAATGTGGCCACCCCA

2481/6881 FIGURE 2281B

GGCTCCAGCACCACCGGAGCTTTCAGCTTTGGAGCAGGACAGAGTGGGAGCACAGCCACCTCCACCCCTTC ACTGAGAGCAAACCTGTGTTTGGAGGCACCGCCACCCTTTGGTCTGAACACCCCTGCGCCTGGAGTGGGC ACATCAGGCAGCCTCTCCTTTGGGGCATCCTCAGCACCCGCCCAAGGCTTTGTTGGTGTTGCACCTTTCGGC AACACTTTTGCTCACCAGCAAGAACACAGCCCGAGGAAGGGACCCAATAACCTTTCAAAACGCAAACTGCTGCCT CTCTGCTATGTGCAAGGCGGTGTGCAAGCACCGGCTGCAGCTTTTTGCTCTCTTTTTCTCTTTTGGGGCTGGGCT GGGTGTGCGTTCTGGTGCTGATGCTTTGGCCTGTGAGGCTAGAGAAATGTAGATGTTAGATGTGCCAGTA CCATCCTGCGCCTCCCAAGCATGCCCCCACTCACTCACGTCGGCATCTCGACCCGTTCAATTACAGCAACGAAGA AGCCAECGCTAAGCGTGGTCTTGGGGGAAGCCCGGAGGCAGTGCTCGGCACCCGGGAACGTGCTCAGGCCTCGGT GGGGCCGGGCAGGCAGGCGGGGGCTAGCCTGCAAGAGAAACAGCCCCAATGCTGGGTAAGAGAGCAGTTCACCC CATCCCCCCTCCACGACCCTGGCGCACGCCCTGTACCTGAAGGCGCCCGGGTTCTGCTGCAGCGCATCTTGTAC CATGTCTTCATTCTCCTCCTGGCAGAGGGAGCCACATGGAGTAGACGAGCCGCTGCAGGGAAAGGGAAAGTGAGCGC GTGGCACAGGGCTCGCTGCTGGAACCCTGCCAGGGCATGCAGACGCACCGGGCTAGGTGTCCCTGCCCCGGGCTC CTCCAGCTGTCTGCTCGGCATACCTAAGGAAAAGCGTGTCTCGGTTACACAGCTTCACAGGCTGCCTCAGTCCTG AAATCCTCGCTCCTGAAATCCTCGCTTCACAGAGGAGAACTTTTGCTCCAGGGTCCCAAGCCCATTAAAGTGTCA GAACTAAGACCAAAACAGATGACTCCAGGTCTAAGCTGCTGTGGACCTCTGAGTCCCTCAGCCACGCCTTCTCAC CATCTCACCCGAGCCACTGCAGGAAGGATCCAGCAGGACATAGTGGACCTCACGATAGCGCGGATCTAAGGGGGGA CAGCCGCCTGGCATCCAGGTCAAAGGCAAAGATCTTCCTAGGGCAGAGGGCAGAGCAGGGGTGAGCTGAGCATGC ATGGAGCAGCTAAGGCCCTGTCACAGCTGACACAGACAACCAGAACATGCAGGTTAAGCCAGGACACAAATATT GAAACAGCCTATATTTAAAGGGCCCAGGGTCAGAGGTAACTGGCCTGGGGTCTCTGCCCCAAGGGCTAAGGGATC CACATCTCACACCTGCAGTGGGGAAAGCTTAGCTTGGGGCAAATACCGTGAACTACTTTGGTGCAGCAGGAAAGA GTTAAGCGAAAGTCATCCTTTCAGCCTTCATTACCCACTGAAAGGCACAAAATCAAACCCCATGTCCTCCTC CTCCTGTGGCACTCACCCTTGGTTCTTCAGAAGAGCAGCCAAGTGACTGGTCTTTATTGCCTGGGGTGGCACAGG GGGCCGGGTAAACAGAGACCCCAGGCTAGGCCCTTCCCGTGCCTACACATTCTTCCCTTTTCTATTCCTCTTGCC CAGCAGCTCCGGCATCAAGGGGTCCAGGAGAAAATGCTTCCCCTTGAGGGCTCGTAAGTCATCGAGGCTGCCAGG GAAGAACCATTCATCATCATTTCCTGAATTTCTCCCTGCCAGGCCCTATTTCAACGGTCCATTCATGCAACAAA TGTTACCACAGCTATGGAGAAATCAACAGGGTGATAAGGGAATCCGGGATCCGCAGTTGAGGGAATGGGTTGTCA AGCCAGACTTATGGGTCAGGAGCCCCCTCTACTGTTTACCAGCAGTGGGAGCCTGGGCAAGTGATTCAATCTCAA GCCCCACTGGCATCTCTGTAAAATAGTAGGTGTGAGGATTCAATGAGCCAATATATCCCAAGATACTTACGTGCCA CAATTTAATAAATGTTAGCTATTCCTGTTGAAGCATAACCTTGGAGAAAGGTTACTTTACAGGGGGGTGAGGAGT GGGGAAGTGAGAGCTGAGCTCATTCTTGATGGATGAGGAGTTAGTCATGTGAGGCGCTTAGGTTAAAACTACATT CACTATAACTCAGTAAAGCAGTCCCGCCCACTCTCCGACCCATGCAGAAATAGGCCTAGGGAGTCACATGTCTCA GTTCAGAAATCTATCGAAGTGGCAGAGCTGGAATTCAAACACAAGCAGCCGTTCTCTGCTATTCCACCCTGGTGT CCAAGCAACATGGTAGGGCAGAAGGAAGAGGATCTTACAAAGAGTAAGGGAAAGGGAGAGGGGCAGAGGCTGCTT CTCAGAGCCACCAAAGGACAAAATAAGACAGGTGTGAGCCCAGTGGAGGAGGCACGGGGCAGAGACCAGCCACTG TTGCTGGCACGCTGGTGCACGTAGCACTGTGGCAGATGGACCTGGAGAGGAAGCAGGAGGGACAGCACAATGGAG CCAAGAAAGGACTTAGCATGGCCGGGCGCGGTGGTTCATGCCTGTAATCCCAGCATTTTGGGAGGCCAAGGTGGG CAGATCACCTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGAGAAATCCCGTCTCTACTAAAAATACAAA TTGTGACTTTGCCCCAAATTTGAGCTCACAAAAACATGTGTTGTATGGAATCAAGGTTTAAAGGATCTAGGGCTG TGCAGGACATGCCTTGTTAATAAAACGTTTACAAGC

GCCAGGGAGCACTGGAGGCCACCCAGTCATGGGGGACACCTTCATCCGTCACATCGCCCTGCTGGGGCTTTGAGAA GGCGCTTCACCGAGATCTACGAGTTCCATAAAACCTTAAAAGAAATGTTCCCTATTGAGGCAGGGGCGATCAATC CAGAGAACAGGATCATCCCCCACCTCCCAGCTCCCAAGTGGTTTGACGGGCAGCGGGCCGCCGAGAACCACCAGG GCACACTTACCGAGTACTGCGGCACGCTCATGAGCCTGCCCACCAAGATCTCCCGCTGTCCCCACCTCCTTGACT TCTTCAAGGTGCGCCCTGATGACCTCAAGCTCCCCACGGACAACCAGACAAAAAAAGCCAGAGACATACTTGATGC CCAAAGATGGCAAGAGTACCGCGACAGACATCACCGGCCCCATCATCCTGCAGACGTACCGCGCCATTGCCAACT ACGAGAAGACCTCGGGCTCCGAGATGGCTCTGTCCACGGGGGACGTGGTGGAGGTCGTGGAGAAGAGCGAGAGCG ACGAGACGGAAGACCCTGAGCCCAACTATGCAGGTGAGCCATACGTCGCCATCAAGGCCTACACTGCTGTGGAGG GGGACGAGGTGTCCCTGCTCGAGGGTGAAGCTGTTGAGGTAATTCACAAGCTCCTGGACGGCTGGTGGGTCATCA GGAAAGACGACGTCACAGGCTACTTCCCGTCCATGTACCTGCAAAAGTCAGGGCAAGACGTGTCCCAGGCCCAAC GCCAGATCAAGCGGGGGGCGCCCCGCAGGTCGTCCATCCGCAACGTGCACAGCATCCACCAGCGGTCGCGGA ${\tt CGCGGCCGAGCGCGACCTCATCCTGAACCGCTGCAGCGAGGGAGCACCAAGCGGAAGCTGGCGTCTGCCGTC}$ GCTGGAGCGCAGTCCCCAGCTAGCGTCTCGGCCCTTGCCGCCCCGTGCCTGTATATACGTGTTCTATAGAGCCTG GCGTCTGGACGCCGAGGCAGCCCCGACCCCTGTCCAGCGCGCCTCCCGCCACCCTCAATAAATGTTGCTTGGAG TGGACCGAGGCTCTGCAGGAATGCAGGGAGGGCCGGGCTCCGCCCCAGGGTTATTTCTAAGTTGA

MYMFLVKWQDLSEKVVYRRFTEIYEFHKTLKEMFPIEAGAINPENRIIPHLPAPKWFDGQRAAENHQGTLTEYCG
TLMSLPTKISRCPHLLDFFKVRPDDLKLPTDNQTKKPETYLMPKDGKSTATDITGPIILQTYRAIANYEKTSGSE
MALSTGDVVEVVEKSESGWWFCQMKAKRGWIPASFLEPLDSPDETEDPEPNYAGEPYVAIKAYTAVEGDEVSLLE
GEAVEVIHKLLDGWWVIRKDDVTGYFPSMYLQKSGQDVSQAQRQIKRGAPPRRSSIRNVHSIHQRSRKRLSQDAY
RRNSVRFLQQRRRQARPGPQSPGSPLEEERQTQRSKPQPAVPPRPSADLILNRCSESTKRKLASAV

 ${\tt GCGGGCTTGCAGGTCCCGCGGGTCGCCCAGCCCAGACTCGGACTCGGACACAGACTCGGAGGACCCGAGTCTC}$ CGGCGCAGCGGGGGGGCTTGCTCCGCTCGCAGGTCATCCACAGCGGTCACTTCATGGTGTCGTCGCCGCACAGC GACTCGCTGCCCCGGCGCGCGACCAGGAGGGGTCCGTGGGGCCCTCCGACTTCGGGCCGCGCAGTATCGACCCC ACACTCACACGCCTCTTCGAGTGCTTGAGCCTGGCCTACAGTGGCAAGCTGGTGTCTCCCCAAGTGGAAGAATTTC AAAGGCCTCAAGCTGCTCTGCAGAGACAAGATCCGCCTGAACAACGCCATCTGGAGGGCCTGGTATATCCAGTAT GTGAAGCGGAGGAAGAGCCCCGTGTGTGGCTTCGTGACCCCCCTGCAGGGGCCTGAGGCTGATGCGCACCGGAAG CCGGAGGCCGTGGTCCTGGAGGGGAACTACTGGAAGCGGCGCATCGAGGTGGTGATGCGGGAATACCACAAGTGG CGCATCTACTACAAGAAGCGGCTCCGTAAGCCCAGCAGGGAAGATGACCTCCTGGCCCCTAAGCAGGCGGAAGGC AGGTGGCCGCCGCGGAGCAATGGTGCAAACAGCTCTTCTCCAGTGTGGTCCCCGTGCTGCTGGGGGACCCAGAG GAGGAGCCGGGTGGGCGCAGCTCCTGGACCTCAATTGCTTTTTGTCCGACATCTCAGACACTCTCTTCACCATG ACTCAGTCCGGCCCTTCGCCCCTGCAGCTGCCGCCTGAGGATGCCTACGTCGGCAATGCTGACATGATCCAGCCG GACCTGACGCCACTGCAGCCAAGCCTGGATGACTTCATGGACATCTCAGATTTCTTTACCAACTCCCGCCTCCCA CAGCCGCCCATGCCTTCAAACTTCCCAGAGCCCCCAGCTTCAGCCCCGTGGTTGACTCCCTCTTCAGCAGTGGG ACCCTGGGCCCAGAGGTGCCCCGGCTTCCTCGGCCATGACCCACCTCTCTGGACACAGCCGTCTGCAGGCTCGG CGGCTCCCACCCCTCTGTACCCCCACCTCTGCTGCATTACCCTCCCCTGCCAAGGTGCCAGGCCTGGAGCCC TGCCCCCACCTCCCTTCCCTCCCATGCCACCCACTGCTTTGCTGCAGGAAGAGCCTCTCTTCTCCCAGG TTAGCCCCTGCCACTGCCAGTCCCCCCACCACTGCGGGGAGCAACACCCCTGCCTCACACAGCTGCTCACAGCA GCTAAGCCGGAGCAAGCCCTGGAGCCACCACTTGTATCCAGCACCCTCCTCCGGTCCCCAGGGTCCCCGCAGGAG ACAGTCCCTGAATTCCCCTGCACATTCCTTCCCCCGACCCCGGCCCTACACCGCCCCGGCCACCTCCAGGCCCG GCCACATTGGCCCCTTCCAGGCCCCTGCTTGTCCCCAAAGCGGAGCGGCTCTCACCCCCAGCGCCCAGCGGCAGT GAACGGCGGCTGTCAGGGGACCTCAGCTCCATGCCAGGCCCTGGGACTCTGAGCGTCCGTGTCTCTCCCCCGCAA AAGCGGCGCTTCAACATCAAGCTGGGGTTTGACACCCTTCATGGGCTCGTGAGCACACTCAGTGCCCAGCCCAGC CTCAAGGTGAGCAAAGCTACCACGCTGCAGAAGACAGCTGAGTACATCCTTATGCTACAGCAGGAGCGTGCGGGC TTGCAGGAGGAGGCCCAGCAGCTGCGGGATGAGATTGAGGAGCTCAATGCCGCCATTAACCTGTGCCAGCAGCAG CTGCCCGCCACAGGGGTACCCATCACACACCAGCGTTTTGACCAGATGCGAGACATGTTTGATGACTACGTCCGA ACCCGTACGCTGCACAACTGGAAGTTCTGGGTGTTCAGCATCCTCATCCGGCCTCTGTTTGAGTCCTTCAACGGG ATGGTGTCCACGGCAAGTGTGCACACCCTCCGCCAGACCTCACTGGCCTGGCCTGGACCAGTACTGCTCTCTGCCC ATCCCTGAGCAAGCCACACGGGCAGTCACAGAGGGCACCCTTGGCAAACCTTTATAGTCCTGGCCAGACCCTGCT GCTCACTCAGCTGCCCTGGGGGCTGCTTTCCCTGGGCACGGGCTCCAGGGATCATCTCTGGGCACTCCCTTCCTG CCCCAGGCCCTGGCTCTCCCTGGGGGGTGGAGCAGGTTCCAGGTTTCACACTTGCCACCTCCTGGAGGT CAAGAAGAGCAGAGTCCCCGTCCCTGCTCTGCCACTGTGCTCCAGCACCGTGACCTTGGGTGACTCGTCCGCTGT CTTTGGACCGCTGTGTTTCAATCTGCAAAATGGGGATGGGGAAGGTTCAATCAGCAGATGACCCCCAGGCCTTGG CAGCTGTGACATTGGGGGCCTAGGCTGGCAACTCCGGGGGCTCAACGGTGGAAAGAGGAGGATGCTGTTTATCTG TCACCTCCACTTGCTCCCCGACAGGTGGGGCACAGACCTCTGTTCCTGAGCAGAAAGCAGAAAAGGAGGTTCCC TCTCTCTGCTCCTTCACTGCTGACCCAGAGGGGCTGCAGGATGGTTTCCCCTGGGAGAGGCCAGGAGGGCCTGAT

MAGALAGLAAGLQVPRVAPSPDSDSDTDSEDPSLRRSAGGLLRSQVIHSGHFMVSSPHSDSLPRRRDQEGSVGPS
DFGPRSIDPTLTRLFECLSLAYSGKLVSPKWKNFKGLKLLCRDKIRLNNAIWRAWYIQYVKRRKSPVCGFVTPLQ
GPEADAHRKPEAVVLEGNYWKRRIEVVMREYHKWRIYYKKRLRKPSREDDLLAPKQAEGRWPPPEQWCKQLFSSV
VPVLLGDPEEEPGGRQLLDLNCFLSDISDTLFTMTQSGPSPLQLPPEDAYVGNADMIQPDLTPLQPSLDDFMDIS
DFFTNSRLPQPPMPSNFPEPPSFSPVVDSLFSSGTLGPEVPPASSAMTHLSGHSRLQARNSCPGPLDSSAFLSSD
FLLPEDPKPRLPPPPVPPPLLHYPPPAKVPGLEPCPPPPFPPMAPPTALLQEEPLFSPRFPFPTVPPAPGVSPLP
APAAFPPTPQSVPSPAPTPFPIELLPLGYSEPAFGPCFSMPRGKPPAPSPRGQKASPPTLAPATASPPTTAGSNN
PCLTQLLTAAKPEQALEPPLVSSTLLRSPGSPQETVPEFPCTFLPPTPAPTPPRPPPGPATLAPSRPLLVPKAER
LSPPAPSGSERRLSGDLSSMPGPGTLSVRVSPPQPILSRGRPDSNKTENRRITHISAEQKRRFNIKLGFDTLHGL
VSTLSAQPSLKVSKATTLQKTAEYILMLQQERAGLQEEAQQLRDEIEELNAAINLCQQQLPATGVPITHQRFDQM
RDMFDDYVRTRTLHNWKFWVFSILIRPLFESFNGMVSTASVHTLRQTSLAWLDQYCSLPALRPTVLNSLRQLGTS

FIGURE 2286

CGGCGCAGCGCGGCGGCTTGCTCCGCTCGCAGGTCATCCACAGCGGTCACTTCATGGTGTCGTCGCCGCACAGC GACTCGCTGCCCCGGCGCGCGCACCAGGAGGGGTCCGTGGGGCCCTCCGACTTCGGGCCGCGCAGTATCGACCCC ACACTCACACGCCTCTTCGAGTGCTTGAGCCTGGCCTACAGTGGCAAGCTGGTGTCTCCCCAAGTGGAAGAATTTC AAAGGCCTCAAGCTGCTCTGCAGAGACAAGATCCGCCTGAACAACGCCATCTGGAGGGCCTGGTATATCCAGTAT GTGAAGCGGAGGAAGACCCCGTGTGTGGCTTCGTGACCCCCCTGCAGGGCCTGAGGCTGATGCGCACCGGAAG ${\tt CCGGAGGCCGTGGTCCTGGAGGGGAACTACTGGAAGCGGCGCATCGAGGTGGTGATGCGGGAATACCACAAGTGG}$ CGCATCTACTACAAGAAGCGGCTCCGTAAGCCCAGCAGGGAAGATGACCTCCTGGCCCCTAAGCAGGCGGAAGGC GAGGAGCCGGGTGGGCGGCAGCTCCTGGACCTCAATTGCTTTTTGTCCGACATCTCAGACACTCTCTTCACCATG ACTCAGTCCGGCCCTTCGCCCCTGCAGCTGCCGCCTGAGGATGCCTACGTCGGCAATGCTGACATGATCCAGCCG GACCTGACGCCACTGCAGCCAAGCCTGGATGACTTCATGGACATCTCAGATTTCTTTACCAACTCCCGCCTCCCA CAGCCGCCCATGCCTTCAAACTTCCCAGAGCCCCCAGCTTCAGCCCCGTGGTTGACTCCCTCTTCAGCAGTGGG ACCCTGGGCCCAGAGGTGCCCCCGGCTTCCTCGGCCATGACCCACCTCTCTGGACACAGCCGTCTGCAGGCTCGG AACAGCTGCCCTGGCCCCTTGGACTCCAGCGCCTTCCTGAGTTCTGATTTCCTCCTTGAAGACCCCAAGCCC CGGCTCCCACCCCTGTACCCCCACCTCTGCTGCATTACCCTCCCCCTGCCAAGGTGCCAGGCCTGGAGCCC TGCCCCCACCTCCCTTCCCATGGCACCACCCACTGCTTTGCTGCAGGAAGAGCCTCTCTTCTCCCCAGG TTAGCCCCTGCCACTGCCAGTCCCCCACCACTGCGGGGAGCAACAACCCCTGCCTCACACAGCTGCTCACAGCA GCTAAGCCGGAGCAAGCCCTGGAGCCACCACTTGTATCCAGCACCCTCCTCCGGTCCCCAGGGTCCCCGCAGGAG ACAGTCCCTGAATTCCCCTGCACATTCCTTCCCCCGACCCCGGCCCCTACACCGCCCCGGCCACCTCCAGGCCCG GCCACATTGGCCCCTTCCAGGCCCCTGCTTGTCCCCAAAGCGGAGCGGCTCTCACCCCCAGCGGCCAGCGGCAGT GAACGGCGGCTGTCAGGGACCTCAGCTCCATGCCAGGCCCTGGGACTCTGAGCGTCCGTGTCTCTCCCCCGCAA CCCATCCTCAGCCGGGGCCGTCCAGACAGCAACAAGAACCGGCGTATCACACATCTCCGCGGAGCAGAAGCGG ${\tt CGCTTCAACATCAAGCTGGGGTTTGACACCCTTCATGGGCTCGTGAGCACACTCAGTGCCCAGCCTCAAGCTC$ GTGAGCAAAGCTACCACGCTGCAGAAGACAGCTGAGTACATCCTTATGCTACAGCAGGAGCGTGCGGGCTTGCAG GAGGAGGCCCAGCAGCTGCGGGATGAGATTGAGGAGCTCAATGCCGCCATTAACCTGTGCCAGCAGCAGCTGCCC GCCACAGGGGTACCCATCACACCACCAGCGTTTTGACCAGATGCGAGACATGTTTGATGACTACGTCCGAACCCGT ACGCTGCACAACTGGAAGTTCTGGGTGTTCAGCATCCTCATCCGGCCTCTGTTTGAGTCCTTCAACGGGATGGTG TCCACGGCAAGTGTGCACACCCTCCGCCAGACCTCACTGGCCTGGCCTGGACCAGTACTGCTCTCTCCCCGCTCTC GAGCAAGCCACACGGGCAGTCACAGAGGGCACCCTTGGCAAACCTTTATAGTCCTGGCCAGACCCTGCTGCTCAC GCCCTGGCTCTGCCCTTCCCTGGGGGGTGGAGCAGGGTCCAGGTTTCACACTTGCCACCTCCTGGAGGTCAAGAA GAGCAGAGTCCCCGTCCCTGCCCACTGTGCTCCAGCACCGTGACCTTGGGTGACTCGTCCGCTGTCTTTTGG ACCGCTGTGTTTCAATCTGCAAAATGGGGATGGGGAAGGTTCAATCAGCAGATGACCCCCAGGCCTTGGCAGCTG ${\tt TGACATTGGGGGCCTAGGCTGGCAACTCCGGGGGCTCAACGGTGGAAAGAGGAGGATGCTGTTTATCTGTCACCT}$ CCACTTGCTCCCGACAGGTGGGGCACAGACCTCTGTTCCTGAGCAGAAAGCAGAAAAGGAGGTTCCCTCTCTC TGCTCCTTCACTGCTGACCCAGAGGGGCTGCAGGATGGTTTCCCCTGGGAGAGGCCAGGAGGGCCTGATCCCAGG

MAGALAGLAAGLQVPRVAPSPDSDSDTDSEDPSLRRSAGGLLRSQVIHSGHFMVSSPHSDSLPRRDQEGSVGPS
DFGPRSIDPTLTRLFECLSLAYSGKLVSPKWKNFKGLKLLCRDKIRLNNAIWRAWYIQYVKRRKSPVCGFVTPLQ
GPEADAHRKPEAVVLEGNYWKRRIEVVMREYHKWRIYYKKRLRKPSREDDLLAPKQAEGRWPPPEQWCKQLFSSV
VPVLLGDPEEEPGGRQLLDLNCFLSDISDTLFTMTQSGPSPLQLPPEDAYVGNADMIQPDLTPLQPSLDDFMDIS
DFFTNSRLPQPPMPSNFPEPPSFSPVVDSLFSSGTLGPEVPPASSAMTHLSGHSRLQARNSCPGPLDSSAFLSSD
FLLPEDPKPRLPPPPVPPPLLHYPPPAKVPGLEPCPPPPFPPMAPPTALLQEEPLFSPRFPFPTVPPAPGVSPLP
APAAFPPTPQSVPSPAPTPFPIELLPLGYSEPAFGPCFSMPRGKPPAPSPRGQKASPPTLAPATASPPTTAGSNN
PCLTQLLTAAKPEQALEPPLVSSTLLRSPGSPQETVPEFPCTFLPPTPAPTPPRPPPGPATLAPSRPLLVPKAER
LSPPAPSGSERRLSGDLSSMPGPGTLSVRVSPPQPILSRGRPDSNKNRRITHISAEQKRRFNIKLGFDTLHGLVS
TLSAQPSLKVSKATTLQKTAEYILMLQQERAGLQEEAQQLRDEIEELNAAINLCQQQLPATGVPITHQRFDQMRD
MFDDYVRTRTLHNWKFWVFSILIRPLFESFNGMVSTASVHTLRQTSLAWLDQYCSLPALRPTVLNSLRQLGTSTS
ILTDPGRIPEQATRAVTEGTLGKPL

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GACGGCAAATGGCGGACTTCGACACCTACGACGATCGGGCCTACAGCAGCTTCGGCGGCGGCAGAGGGTCCCGCG ATCTACCTTTCAATACGGTTCAGGGCGACATAGATGCTATCTTTAAGGATCTCAGCATAAGGAGTGTACGGCTAG TCAGAGACAAAGACACAGATAAATTTAAAGGATTCTGCTATGTAGAATTCGATGAAGTGGATTCCCTTAAGGAAG CCTTGACATACGATGGTGCACTGTTGGGCGATCGGTCACTTCGTGTGGACATTGCAGAAGGCAGAAAACAAGATA AAGGTGGCTTTGGATTCAGAAAAGGTGGACCAGATGACAGAGGAATGGGTAGCTCTCGAGAATCTAGAGGTGGAT GGGATTCCCGGGATGACTTCAATTCTGGCTTCAGGGATGACTTCTTAGGGGGCAGGGGAGGTAGTCGCCCAGGCG ACCGGCGAACAGGCCCCCCATGGGCAGCCGCTTCAGAGATGGCCCTCCCCTCCGTGGATCCAACATGGATTTCA GAGAACCCACAGAAGAGGAAAGAGCACAGAGACCACGACTCCAGCTTAAACCTCGAACAGTCGCGACGCCCCTCA ATCAAGTAGCCAATCCCAACTCTGCTATCTTCGGGGGTGCCAGGCCTAGAGAGGAAGTCGTTCAAAAAGGAGCAAG AATGAGCCTGCGGTTGGGAGGGAATGGGGCGTGGGGGGTTAGAGCAGGACCACAGCCTGGTGAGTCCCCGGGCAG CCGTCCTGCAGCCGCCACTCCTGCGCCTGCCATTGGCCTCCTCACAGCGGAAACACAGCTTGTGAGTGCATGTCA TTCTTCCGCTGCTTCCCCATTTTCCTTCTGTCCTTTTTCTCCTGCTCCTTGTTTTCCCAGCAGCACATGGGGTTC CTCGGAGGAGCAGAGGTGGCCGCCGTGGGGGGGGCGTTTGGGCTGCGGTGCTCATTTTTCCTTTGCTTTCTC TTTACTTTAGACACTGGCCCAACTCCAGGCGTTTCCTTTCATTCCCTCAGTGCTTCTCTTCTGACCTGCATGTTG AGTTCTGTATTGCTGGGGCTTCCAACAAAAACCAGAGTCACTGACAGAGGGAACAGCAGAGACCTTGTTGGTATT CAGCTGTGATGGATATAGAGAATCAGAGGCACCTTGTTTTCACAACTAGGATAAAAATATCTGCAGGGTCCTTTC CATTCCTATTTAGAGGGAGTCCTGGCTCCATGACCCCCTCCCGAGTGGACTGTCCAAGCAGATAGGCTCACACGA GAAACAGTGAGGCTGAAAGGGGGGCTATGGAAGAGCGGTAGGGAGTCCACGGAGAAGATGCAGTGAATGCTTGC GGGTGCAGTGAATGGCCAGCGGGTTTCTTTTCTGCTGGGCCCAAGGCGCTTTGGGGGTGGAGGGGGGTGGTGCTGGT GCTGCACTGGGCTGACTGCGGCGCTGACGCAGCGTTTCCCCCCATCCCTGTTGCCTGTGTTGTTGTGTGGATCTGT TCCTAGTATAGGCAACATAATGAGATACTGTGCTTCCCACCTCCCCTTCAGTTCAGAGCCAAAATGGGTCTAGAA TCTGGCACTTTACTCATTTCCTTTGATAAATTGTACTATGCAGAGCTGTCAGGAACCTTCAGATAGCAGTAGAGG ACTGCAGCTGTCTAGGTCTGCGGCCACATCTTGGGGACACACTGGACTGTTCCCATGTGCAGGGTTCAGCAGTTA TGTGGGAGTGCTAGGGGTTAGGCTTTGAGCTTGAACGCCTGCGTGTGAACAGATGAAAAATCCTTCAGTACCCA TGATGGCAGGGCCAGGGTGGCCTGGGGCACCCAGCGGAATGTGCTTAGTATTTGGTCACCAGCCGTCATCCTGGG CTCTGCTTCTGAGATAAGAACCATTTGTGTAACACCAACACTTAACTTCAGAAAGACATGCATTATGTGGTGTAA TCAAACCCGATGCTTTCAGATGACCTACTTACATCTTCAATGTGGATAAGATAAAGAACAAAACACATGCATCTA AACTGCTGGGCAATCCAGTTGACTTTTAAATGTAAGAATGGAATTCCAAACACTTAACACATTCAGCTATATGAC

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2489/6881 FIGURE 2289

MADFDTYDDRAYSSFGGGRGSRGSAGGHGSRSQKELPTEPPYTAYVGNLPFNTVQGDIDAIFKDLSIRSVRLVRD KDTDKFKGFCYVEFDEVDSLKEALTYDGALLGDRSLRVDIAEGRKQDKGGFGFRKGGPDDRGMGSSRESRGGWDS RDDFNSGFRDDFLGGRGGSRPGDRRTGPPMGSRFRDGPPLRGSNMDFREPTEEERAQRPRLQLKPRTVATPLNQV ANPNSAIFGGARPREEVVQKEQE

GACGGCAAATGGCGGACTTCGACACCTACGACGATCGGGCCTACAGCAGCTTCGGCGGCGGCAGAGGGTCCCGCG GCAGTGCTGGTGGCCATGGTTCCCGTAGCCAGAAGGAGTTGCCCACAGAGCCCCCCTACACAGACATACGTAGGAA ATCTACCTTTCAATACGGTTCAGGGCGACATAGATGCTATCTTTAAGGATCTCAGCATAAGGAGTGTACGGCTAG TCAGAGACAAAGACACAGATAAATTTAAAGGATTCTGCTATGTAGAATTCGATGAAGTGGATTCCCTTAAGGAAG ${\tt CCTTGACATACGATGGTGCACTGTTGGGCGATCGGTCACTTCGTGTGGACATTGCAGAAGGCAGAAAACAAGATA}$ CCAACATGGATTTCAGAGAACCCACAGAAGAGGAAAGAGCACAGAGACCACGACTCCAGCTTAAACCTCGAACAG TCGCGACGCCCTCAATCAAGTAGCCAATCCCAACTCTGCTATCTTCGGGGGTGCCAGGCCTAGAGAGGAAGTCG TGAGTCCCCGGGCAGCCGTCCTGCAGCCGCCACTCCTGCGCCTTGCCATTGGCCTCCTCACAGCGGAAACACAGCT TGTGCGTTTTTTCTTCCGCTGCTTCCCCATTTTCCTTGTCCTTTTTCTCCTGCTCCTTGTTTTCCCAG $\tt TTCCTTTGCTTTACTTTAGACACTGGCCCAACTCCAGGCGTTTCCTTTCATTCCCTCAGTGCTTCTCTT$ CTGACCTGCATGTTGAGTTCTGTATTGCTGGGGCTTCCAACAAAAACCAGAGTCACTGACAGAGGGAACAGCAGA GACCTTGTTGGTATTCAGCTGTGATGGATATAGAGAATCAGAGGCACCTTGTTTTCACAACTAGGATAAAAATAT $\tt CTGCAGGGTCCTTTCCATTCCTATTTAGAGGGAGTCCTGGCTCCATGACCCCCTCCCGAGTGGACTGTCCAAGCA$ GGGGGTGGTGCTGCACTGGGCTGACTGCGCCGCTGACGCAGCGTTTCCCCCCATCCCTGTTGCCTGTGT GTTGTGTGGATCTGTTCCTAGTATAGGCAACATAATGAGATACTGTGCTTCCCACCTCCCCTTCAGTTCAGAGCC AAAATGGGTCTAGAATCTGGCACTTTACTCATTTCCTTTGATAAATTGTACTATGCAGAGCTGTCAGGAACCTTC AGATAGCAGTAGAGGACTGCAGCTGTCTAGGTCTGCGGCCACATCTTGGGGACACACTGGACTGTTCCCATGTGC AGGGTTCAGCAGTTATGTGGGAGTGCTAGGGGTTAGGCTTTTGAGCTTGAACGCCTGCGTGTGAACAGATGAAAA GAGGCCCTCGCCAGGTGATGGCAGGGCCAGGGTGGCCTGGGGCACCCAGCGGAATGTGCTTAGTATTTGGTCACC TCCACCTGTCAGCTTCTCTGCTTCTGAGATAAGAACCATTTGTGTAACACCAACACTTAACTTCAGAAAGACATG CATTATGTGGTGTAATCAAACCCGATGCTTTCAGATGACCTACTTACATCTTCAATGTGGATAAGATAAAGAACA AAACACATGCATCTAAACTGCTGGGCAATCCAGTTGACTTTTAAATGTAAGAATGGAATTCCAAACACTTAACAC ACGTAATATTT

 ${\tt MADFDTYDDRAYSSFGGGRGSRGSAGGHGSRSQKELPTEPPYTAYVGNLPFNTVQGDIDAIFKDLSIRSVRLVRDKDTDKFKGFCYVEFDEVDSLKEALTYDGALLGDRSLRVDIAEGRKQDKGGFGFRKGGPDDRGFRDDFLGGRGGSRPGDRRTGPPMGSRFRDGPPLRGSNMDFREPTEEERAQRPRLQLKPRTVATPLNQVANPNSAIFGGARPREEVVQKEQE$

GGGAAGAGGGGGGGGGAGAATGGAGGTGGAGGCCGTCTGTGGTGGCGCGGGCGAGGTGGAGGCCCAGGACTCTGA CCCTGCCCTGCCTTCAGCAAGGCCCCCGGCAGCGCCACTACGAACTGCCGTGGGTTGAAAAATATAGGCC GCCCAACATCATCATTGCGGGCCCTCCAGGAACCGGCAAGACCACAAGCATTCTGTGCTTGGCCCGGGCCCTGCT GGGCCCAGCACTCAAAGATGCCATGTTGGAACTCAATGCTTCAAATGACAGGGGCATTGACGTTGTGAGGAATAA AATTAAAATGTTTGCTCAACAAAAAGTCACTCTTCCCAAAGGCCGACATAAGATCATCATTCTGGATGAAGCAGA CAGCATGACCGACGGAGCCCAGCAAGCCTTGAGGAGAACCATGGAAATCTACTCTAAAACCACTCGCTTCGCCCT TGCTTGTAATGCTTCGGATAAGATCATCGAGCCCATTCAGTCCCGCTGTGCAGTCCTCCGGTACACAAAGCTGAC CGACGCCCAGATCCTCACCAGGCTGATGAATGTTATCGAGAAGGAGAGGGTACCCTACACTGATGACGGCCTAGA AGCCATCATCTTCACGGCCCAGGGAGACATGAGGCAGGCGCTGAACAACCTGCAGTCCACCTTCTCAGGATTTGG CTGTGTGAATGCCAACATTGACGAAGCCTACAAGATTCTTGCTCACTTGTGGCATCTGGGCTACTCACCAGAAGA TATCATTGGCAACATCTTTCGAGTGTGTAAAACTTTCCAAATGGCAGAATACCTGAAACTGGAGTTTATCAAGGA AATTGGATACACTCACATGAAAATAGCGGAAGGAGTGAACTCTCTTTTGCAGATGGCAGGCCTCCTGGCAAGGCT AGGTACAGGAGCCGCGCTTTCTGATGGGGGAAAATGCCGCCTTAGGCTGGAGCCAACATGACTGTCCTTTAAAC TGAGGTCAGAAGTTCAAGACCAGCCTGGCCAACATGGGGAAACCCTGTCTTTACTAAAAATTAAAAATTAGCTG GGTGTGGTGGCGGCACCTGTAATCCCAGCTACTCGGGAGGCTGTGGCAGGAGAATCGCTTGAACCCAGGAGGTG GAGGTTGCAGTGAGCCAAGATCACACCATTGCACTCCAGCCTGGGCGACAGAGTCTCCATCTGGGGAAAAAAATT **AAATAAATAAACTCCCG**

ATTAAGGAGGCAGCGGAGGCTGAGTCCTGGCCGCGGGCCGGGGCCGGGGCCGCTGGCAGGAGCGCTTGG TGGAACTCCGCGTTCACCCGCAAAGACGAGATCATCACCAGCCTCGTGTCTGCCTTAGACTCCATGTGCTCAGCG CTGTCCAAACTGAACGCCGAGGTGGCCTGTGTCGCCGTGCACGATGAGAGCGCCTTTGTGGTGGGCACAGAGAAG GGGAGAATGTTCCTGAATGCCCGGAAGGAGCTACAGTCAGACTTCCTCAGGTTCTGCCGAGGGCCCCCGTGGAAG GAACATGGCTCAGATGTGTACCTTCTGCGGAAGATGGTAGAGGAGGTGTTTGATGTTCTTTATAGCGAGGCCCTG GGAAGGGCCAGTGTGGTGCCACTGCCCTATGAGAGGCTGCTCAGGGAGCCAGGGCTGCTGGCCGTGCAGGGGCTG CCCGAAGGCCTGGCCTTCCGAAGGCCAGCCGAGTATGACCCCAAGGCCCTCATGGCCATCCTGGAACACAGCCAC GTCTCCCTGATTCCCAAGGGGTCACGGGACTGTGGCCTGCATGGCCAGGCCCCCAAGGTGCCACCCCAGGACCTG CCCCAACCGCCACCTCCTCCATGGCCAGCTTCCTGTACAGCACGGCGCTCCCCAACCACGCCATCCGAGAG CTCAAGCAGGAAGCACCTTCCTGCCCCCTTGCCCCCAGCGACCTGGGCCTGAGTCGGCCCATGCCAGAGCCCAAG GCCACCGGTGCCCAAGACTTCTCCGACTGTTGTGGACAGAAGCCCACTGGGCCTGGTGGGCCTCTCATCCAGAAC GTCCATGCCTCCAAGCGCATTCTCTTCTCCATCGTCCATGACAAGTCAGAGAAGTGGGACGCCTTCATAAAGGAA ACCGAGGACATCAACACGCTCCGGGAGTGTGTGCAGATCCTGTTTAACAGCAGATATGCGGAAGCCCTGGGCCTG GACCACATGGTCCCCGTGCCCTACCGGAAGATTGCCTGTGACCCGGAGGCTGTGGAGATCGTGGGCATCCCGGAC AAGATCCCCTTCAAGCGCCCCTGCACTTATGGAGTCCCCAAGCTGAAGCGGATCCTGGAGGAGCGCCATAGTATC CACTTCATCATTAAGAGGATGTTTGATGAGCGAATTTTCACAGGGAACAAGTTTACCAAAGACACCACGAAGCTG GAGCCAGCCAGCCGCCAGAGGACACCTCTGCAGAGGTCTCTAGGGCCACCGTCCTTGACCTTGCTGGGAATGCT CGGTCAGACAAGGGCAGCATGTCTGAAGACTGTGGGCCAGGAACCTCCGGGGAGCTGGGCCGGGTGAGGCCGATC AAAATTGAGCCAGAGGATCTGGACATCATTCAGGTCACCGTCCCAGACCCCTCGCCAACCTCTGAGGAAATGACA GAGGACGCGCGGCGGAGAGAGGCCCGTGGAGGACAGCCACGGTGACGTGATCCGGCCCCTGCGGAAGCAGGTG GAGCTGCTCTTCAACACACGATACGCCAAGGCCATTGGCATCTCGGAGCCCGTCAAGGTGCCGTACTCCAAGTTT ATCGCCAAGCTCCGGAAGATTCTGGAGGCCAGCAACAGCATCCAGTTTGTCATCAAGAGGCCCGAGCTGCTCACT GAGGGAGTCAAAGAGCCCATCATGGATAGTCAAGGAACTGCCTCCTCACTTGGCTTCTCCCCCTGCCCTGCCC CCAGAGAGGGATTCCGGGGACCCTCTGGTGGACGAGAGCCTGAAGAGACAGGGCTTTCAAGAAAATTATGACGCG AGGCTCTCACGGATCGACATCGCCAACACACTAAGGGAGCAGGTCCAGGACCTTTTCAATAAGAAATACGGGGAA GCCTTGGGCATCAAGTACCCGGTCCAGGTCCCCTACAAGCGGATCAAGAGTAACCCCGGCTCCGTGATCATCGAG GGGCTGCCCCAGGAATCCCGTTCCGAAAGCCCTGTACCTTCGGCTCCCAGAACCTGGAGAGGATTCTTGCTGTG GCTGACAAGATCAAGTTCACAGTCACCAGGCCTTTCCAAGGACTCATCCCAAAGCCTGATGAAGATGACGCCAAC AGACTCGGGGAGAAGGTGATCCTGCGGGAGCAGGTGAAGGAACTCTTCAACGAGAAATACGGTGAGGCCCTGGGC CTGAACCGGCCGGTGCTGGTCCCTTATAAACTAATCCGGGACAGCCCAGACGCCGTGGAGGTCACGGGTCTGCCT GATGACATCCCCTTCCGGAACCCCAACACGTACGACATCCACCGGCTGGAGAAGATCCTGAAGGCCCGAGAGCAT TCCTCGTCCTCTAACCCGGATTCAGTGGCCATCGGCCAACCAGATCTCACTCGTGCAATGGCCAATGTACATGGTG GACTATGCCGGCCTGAACGTGCAGCTCCCGGGACCTCTTAATTACTAGACCTCAGTACTGAATCAGGACCTCACT CAGAAAGACTAAAGGAAATGTAATTTATGTACAAAATGTATATTCGGATATGTATCGATGCCTTTTAGTTTTTCC

MALLGKRCDVPTNGCGPDRWNSAFTRKDEIITSLVSALDSMCSALSKLNAEVACVAVHDESAFVVGTEKGRMFLN
ARKELQSDFLRFCRGPPWKDPEAEHPKKVQRGEGGGRSLPRSSLEHGSDVYLLRKMVEEVFDVLYSEALGRASVV
PLPYERLLREPGLLAVQGLPEGLAFRRPAEYDPKALMAILEHSHRIRFKLKRPLEDGGRDSKALVELNGVSLIPK
GSRDCGLHGQAPKVPPQDLPPTATSSSMASFLYSTALPNHAIRELKQEAPSCPLAPSDLGLSRPMPEPKATGAQD
FSDCCGQKPTGPGGPLIQNVHASKRILFSIVHDKSEKWDAFIKETEDINTLRECVQILFNSRYAEALGLDHMVPV
PYRKIACDPEAVEIVGIPDKIPFKRPCTYGVPKLKRILEERHSIHFIIKRMFDERIFTGNKFTKDTTKLEPASPP
EDTSAEVSRATVLDLAGNARSDKGSMSEDCGPGTSGELGGLRPIKIEPEDLDIIQVTVPDPSPTSEEMTDSMPGH
LPSEDSGYGMEMLTDKGLSEDARPEERPVEDSHGDVIRPLRKQVELLFNTRYAKAIGISEPVKVPYSKFLMHPEE
LFVVGLPEGISLRRPNCFGIAKLRKILEASNSIQFVIKRPELLTEGVKEPIMDSQGTASSLGFSPPALPPERDSG
DPLVDESLKRQGFQENYDARLSRIDIANTLREQVQDLFNKKYGEALGIKYPVQVPYKRIKSNPGSVIIEGLPPGI
PFRKPCTFGSQNLERILAVADKIKFTVTRPFQGLIPKPDEDDANRLGEKVILREQVKELFNEKYGEALGLNRPVL
VPYKLIRDSPDAVEVTGLPDDIPFRNPNTYDIHRLEKILKAREHVRMVIINQLQPFAEICNDAKVPAKDSSIPKR
KRKRVSEGNSVSSSSSSSSSSSSSSSSSSSNPDSVASANQISLVQWPMYMVDYAGLNVQLPFGPLNY

2495/6881 FIGURE 2295A

GCGCTCTCCAGCCGCGCCGCCCGCCTGCCGCGTCACCCCGGCCTCTGCCTCTGTCCCCCAGTGATCGGATCAA CGCCCCTCTCGCCTCCGCTCGCCAGCTCCCCTCAGCCGAGGCTGCTCCGCGGCGGCCGCAGCCCGCGCG CCAAGTTGCAATGTCCACCCTCCCCGTTGAAGATGAGGAGTCCTCGGAGAGCAGGATGGTGGTGACATTCCTCAT GTCAGCTCTCGAGTCCATGTGTAAAGAACTGGCCAAGTCCAAAGCCGAAGTGGCCTGCATTGCAGTGTATGAAAC AGACGTGTTTGTCGTCGGAACTGAAAGAGACGTGCTTTTGTCAATACCAGAAAGGATTTTCAAAAAGATTTTGT AAAATATTGTGTTGAAGAAGAAGAAAAAGCTGCAGAGATGCATAAAATGAAATCTACAACCCAGGCAAATCGGAT GAGTGTAGATGCTGTAGAAATTGAAACACTCAGAAAAACAGTTGAGGACTATTTCTGCTTTTGCTATGGGAAAGC TTTAGGCAAATCCACAGTGGTACCTGTACCATATGAGAAGATGCTGCGAGACCAGTCGGCTGTGGTAGTGCAGGG GCTTCCGGAAGGTGTTGCCTTTAAACACCCCGAGAACTATGATCTTGCAACCCTGAAATGGATTTTGGAGAACAA AGCAGGGATTTCATCATCATTAAGAGACCTTTTTTAGAGCCAAAGAAGCATGTAGGTGGTCGTGTGATGGTAAC AGATGCTGACAGGTCAATACTATCTCCAGGTGGAAGTTGTGGCCCCATCAAAGTGAAAACTGAACCCACAGAAGA TTCTGGCATTTCCCTGGAAATGGCAGCTGTGACAGTAAAGGAAGAATCAGAAGATCCTGATTATTATCAATATAA CATTCAAGCAGGCCCTTCTGAAACTGATGATGATGAAAAACAGCCCCTATCGAAGCCTTTGCAAGGAAGCCA CCATTCTTCAGAGGGCAATGAAGGCACAGAAATGGAAGTACCAGCAGAAGATTCTACTCAACATGTCCCTTCAGA AACAAGTGAGGACCCTGAAGTTGAGGTGACTATTGAAGATGATGATTATTCTCCACCGTCTAAGAGACCAAAGGC CAATGAGCTACCGCAGCCACCAGTCCCGGAACCCGCCAATGCTGGGAAGCGGAAAGTGAGGGAGTTCAACTTCGA GAAATGGAATGCTCGCATCACTGATCTACGTAAACAAGTTGAAGAATTGTTTGAAAGGAAATATGCTCAAGCCAT AAAAGCCAAAGGTCCGGTGACGATCCCGTACCCTCTTTTCCAGTCTCATGTTGAAGATCTTTATGTAGAAGGACT TCCTGAAGGAATTCCTTTTAGAAGGCCATCTACTTACGGAATTCCTCGCCTGGAGAGGATATTACTTGCAAAGGA AAGGATTCGTTTTGTGATTAAGAAACATGAGCTTCTGAATTCAACACGTGAAGATTTACAGCTTGATAAGCCAGC ATTTGCGGAAGCCTTGGGGAGCACTGAAGCCAAGGCTGTACCGTACCAAAAATTTGAGGCACACCCGAATGATCT GTACGTGGAAGGACTGCCAGAAAACATTCCTTTCCGAAGTCCCTCATGGTATGGAATCCCAAGGCTGGAAAAAAT CATTCAAGTGGGCAATCGAATTAAATTTGTTATTAAAAGACCAGAACTTCTGACTCACAGTACCACTGAAGTTAC TCAGCCAAGAACGAATACACCAGTCAAGGAAGATTGGAATGTCAGAATTACCAAGCTACGGAAGCAAGTGGAAGA GATTTTTAATTTGAAATTTGCTCAAGCTCTTGGACTCACCGAGGCAGTAAAAGTACCATATCCTGTGTTTGAATC AAACCCGGAGTTCTTGTATGTGGAAGGCTTGCCAGAGGGGATTCCCTTCCGAAGCCCTACCTGGTTTGGAATTCC ACGACTTGAAAGGATCGTCCGCGGGAGTAATAAAATCAAGTTCGTTGTTAAAAAACCTGAACTAGTTATTTCCTA CTTGCCTCCTGGGATGGCTAGTAAAATAAACACTAAAGCTTTGCAGTCCCCCAAAAGACCACGAAGTCCTGGGAG TAATTCAAAGGTTCCTGAAATTGAGGTCACCGTGGAAGGCCCTAATAACAACAATCCTCAAACCTCAGCTGTTCG AACCCCGACCCAGACTAACGGTTCTAACGTTCCCTTCAAGCCACGAGGGAGAGTTTTCCTTTGAGGCCTGGAA TGCCAAAATCACGGACCTAAAACAGAAAGTTGAAAATCTCTTCAATGAGAAATGTGGGGAAGCTCTTGGCCTTAA ACAAGCTGTGAAGGTGCCGTTCGCGTTATTTGAGTCTTTCCCGGAAGACTTTTATGTGGAAGGCTTACCTGAGGG TGTGCCATTCCGAAGACCATCGACTTTTGGCATTCCGAGGCTGGAGAAGATACTCAGAAACAAAGCCAAAATTAA GTTCATCATTAAAAAGCCCGAAATGTTTGAGACGGCGATTAAGGAGACCACCTCCTAAGAGCCCTCCCAGAAA AATAAATTCATCACCCAATGTTAATACTACTGCATCAGGTGTTGAAGACCTTAACATCATTCAGGTGACAATTCC AGATGATGATAATGAAAGACTCTCGAAAGTTGAAAAAGCTAGACAGCTAAGAGAACAAGTGAATGACCTCTTTAG TCGGAAATTTGGTGAAGCTATTGGTATGGGTTTTCCTGTGAAAGTTCCCTACAGGAAAATCACAATTAACCCTGG CTGTGTGGTGGTTGATGGCATGCCCCCGGGGGTGTCCTTCAAAGCCCCCAGCTACCTGGAAATCAGCTCCATGAG AAGGATCTTAGACTCTGCCGAGTTTATCAAATTCACGGTCATTAGACCATTTCCAGGACTTGTGATTAATAACCA GCTGGTTGATCAGAGTGAGTCAGAAGGCCCCGTGATACAAGAATCAGCTGAACCAAGCCAGTTGGAAGTTCCAGC CCTCCTAGGCTTAAAGTATCAGTGGTTGAGAAGAGCTTTTCGGACCTGTTACTACCCCAAGCTGTAATATACT TGTGAATTAAAGAGCAGAGTGACTGTGGGTCTGGAATGGCTGGTGTACTTGGGAATGTACTATCAGGATTTTACA

2496/6881 FIGURE 2295B

MAQVAMSTLPVEDEESSESRMVVTFLMSALESMCKELAKSKAEVACIAVYETDVFVVGTERGRAFVNTRKDFQKD
FVKYCVEEEEKAAEMHKMKSTTQANRMSVDAVEIETLRKTVEDYFCFCYGKALGKSTVVPVPYEKMLRDQSAVVV
QGLPEGVAFKHPENYDLATLKWILENKAGISFIIKRPFLEPKKHVGGRVMVTDADRSILSPGGSCGPIKVKTEPT
EDSGISLEMAAVTVKEESEDPDYYQYNIQAGPSETDDVDEKQPLSKPLQGSHHSSEGNEGTEMEVPAEDSTQHVP
SETSEDPEVEVTIEDDDYSPPSKRPKANELPQPPVPEPANAGKRKVREFNFEKWNARITDLRKQVEELFERKYAQ
AIKAKGPVTIPYPLFQSHVEDLYVEGLPEGIPFRRPSTYGIPRLERILLAKERIRFVIKKHELLNSTREDLQLDK
PASGVKEEWYARITKLRKMVDQLFCKKFAEALGSTEAKAVPYQKFEAHPNDLYVEGLPENIPFRSPSWYGIPRLE
KIIQVGNRIKFVIKRPELLTHSTTEVTQPRTNTPVKEDWNVRITKLRKQVEEIFNLKFAQALGLTEAVKVPYPVF
ESNPEFLYVEGLPEGIPFRSPTWFGIPRLERIVRGSNKIKFVVKKPELVISYLPPGMASKINTKALQSPKRPRSP
GSNSKVPEIEVTVEGPNNNNPQTSAVRTPTQTNGSNVPFKPRGREFSFEAWNAKITDLKQKVENLFNEKCGEALG
LKQAVKVPFALFESFPEDFYVEGLPEGVPFRRPSTFGIPRLEKILRNKAKIKFIIKKPEMFETAIKESTSSKSPP
RKINSSPNVNTTASGVEDLNIIQVTIPDDDNERLSKVEKARQLREQVNDLFSRKFGEAIGMGFPVKVPYRKITIN
PGCVVVDGMPPGVSFKAPSYLEISSMRRILDSAEFIKFTVIRPFPGLVINNQLVDQSESEGPVIQESAEPSQLEV
PATEEIKETDGSSQIKQEPDPTW

GCGACTTCCTCTTTCCAGTGCATTTAAGGCGCAGCCTGGAAGTGCCAGGGAGCACTGGAGGCCACCCAGTCATCG TGTTCCTGGTGAAATGGCAGGACCTGTCGGAGAAGGTGGTCTACCGGCGCTTCACCGAGATCTACGAGTTCCATA AAACCTTAAAAGAAATGTTCCCTATTGAGGCAGGGGCGATCAATCCAGAGAACAGGATCATCCCCCACCTCCCAG $\verb|CTCCCAAGTGGTTTGACGGGCAGGGCCCGAGAACCGCCAGGGCACACTTACCGAGTACTGCGGCACGCTCA||$ TGAGCCTGCCCACCAAGATCTCCCGCTGTCCCCACCTCCTCGACTTCTTCAAGGTGCGCCCTGATGACCTCAAGC $\verb|CCCTGGTGCTCAGGAACCCACAGCCACAAGCCCCCTGCCAAGGCTCAGGCAGCCTTGCCCCTGGGAGGACTCCGG|\\$ $\tt CTCTGTTAGGGGCCCTAAATGTCCTCCCCACACTGTGGGTCGCCTTCTGTCTTAGTGTGCACCCTGTGGTGGCTG$ ${\tt CATTA} \underline{{\tt TGA}} {\tt AGTGGGCTCAGAGCTGTGATTCTGTGAGCATGTGACCTCATTGTCCGGTGT$ GGTGAAGGTGACATTTCCAAATCTGAGCATTGGACATCAGTGTGTCTGTGTCCCTGTGTCCTCACCATCCCTGAT ${\tt GGCTGCAGGGAGCCGCTGGGCCCTCAGTCACATTCCCGCACCTCTGGCACAGGTTGGTGGTTCTGTCAG}$ ATGAAAGCAAAGCGAGGCTGGATCCCAGCGTCCTTCCTCGAGCCCCTGGACAGTCCTGACGAGACGGAAGACCCT

MGDTFIRHIALLGFEKRFVPSQHYVYMFLVKWQDLSEKVVYRRFTEIYEFHKTLKEMFPIEAGAINPENRIIPHL PAPKWFDGQRAAENRQGTLTEYCSTLMSLPTKISRCPHLLDFFKVRPDDLKLPTDNQTKKPETYLMPKDGKSTAT DITGPIILQTYRAIANYEKTSGSEMALSTGDVVEVVEKSESGQTSHLTGLLPLVLRNPQPQAPCQGSGSLAPGRT PALLGALNVLPTLWVAFCLSVHPVVAVGICAWQAGAGHVCVFCLDGYGTVCSL

2500/6881 FIGURE 2299A

GAGCCCCAGGGAGGCGGATCTGGGCCCCGAGAAGGACACCCGCCTGGATTTGCCCCGTAGGCCCGGGCCCGGGCCC TGGCTGTGGATTTCACCCAGGAGGAGTGGCGGCAACTGGACCCTGATGAGAAGATAACATACGGGGATGTGATGT TGGAGAACTACAGCCATCTAGTTTCCTTGGCTTATGAGGTGGCAACATCTTGTACTTCGGAGATTCTGAAGCCGA ${\tt GCAACTTGCCCAAGTCCTTCTTTTTCCCATTAACAAGATATGATATCACCAAGCCAAACGTCATCATTAAGTT}$ GGAGCAGGGAGAGCTGTGGATAACGGGAGGTGAATTTCCATGTCAACATAGTCCAGCCCCTCACATCCTCAG TGTAATAACACCTCGAAGACGCTATCCGATCCATCAGACCCAGTATTCCTGTCCGGGGGTACTTCCCACAGTGTG CTGGAATGGTTATCACAAGAAGGCTGTGCTGTCCCCTCGCAACTCCAGGATGGTGTGTAGCCCAGTGACTGTGAG GATCGCCCCTCCTGACAGAAGATTTTCACGTTCTGCGATACCAGAGCAGATAATCAGCTCAACACTGTCGTCACC ATCAAGTAATGCCCCAGACCCATGTGCAAAGGAGACTGTACTGAGTGCCCTCAAAGAGAAGAAGAAGAAAAAGGAC AGTGGAGGAGAGACCAAATATTCCTTGATGGCCAGGAAAATAAAAGAAGGCGCCATGATAGCAGTGGCAGTGG ACATTCAGCATTTGAGCCCCTGGTGGCCAGTGGAGTCCCCGCTTCTTTTGTGCCTAAGCCTGGGTCTCTGAAGAG AGGCCTCAATTCTCAGAGCTCAGATGACCACTTGAATAAGAGATCCCGAAGCTCTTCCATGAGCTCCTTGACAGG $\tt CGCTTACACAAGTGGCATCCCTAGCTCCAGCCGCAATGCCATTACCAGTTCCTACAGCTCCACTCGAGGCATCTC$ ACAGCTCTGGAAGAGAAATGGCCCCAGTTCATCACCCTTCTCTAGCCCAGCCTCATCCCGCTCCCAGACACCGGA GAGGCCAGCAAAGAAAATAAGAGAAGAAGAGCTGTGTCATCATTCCAGTTCTTCAACTCCATTGGCAGCAGACAA GGAGTCCCAGGGAGAAAAGGCTGCAGATACAACCCCAAGGAAGAAACAAAACTCGAATTCTCAGTCTACACCTGG CAGCTCTGGGCAGCGTAAGCGGAAAGTTCAGCTGCTGCCTTCTCGGCGAGGGGAACAGCTGACCTTGCCTCCACC TCCCCAGCTTGGCTATTCGATCACTGCCGAGGACCTAGACTTAGAGAAGAAGGCTTCATTACAGTGGTTCAACCA GGCCTTGGAGGACAAGAGTGATGCTGCCTCGAACTCTGTCACTGAGACCCCACCTACCACTCAGCCTTCATTTAC CTTIACCCTGCCTGCTGCTACTGCCTCCCCACCCACCTCCTCCTGGCCCCAAGCACCAACCCACTGTTAGA GAGCTTGAAGAAGATGCAGACTCCCCCGAGCCTGCCCACCCTGCCCAGAATCTGCTGGAGCAGCAACCACTGAGGC CCTCTCACCTCCAAAGACACCCAGCCTCCTACCCCGCTGGGTTTATCACAGTCAGGGCCGCCAGGGCTGCTCCC TGACACCAAGGCACCTCCAACCCTTCAAGCAGAGACGGCTACCAAACCCCAAGCCACATCTGCCCCGTCCCCGC $\verb|CCCCAAGCAAAGCTTCCTGTTTGGAACACAGAACACCTCACCTTCCAGCCCTGCCGCCCCTGCTGCATCTTCAGC| \\$ AGTCACAGCCACAGCGCCCTCCAGCTCCTCCCCCACGACCACCAGCACCACAGCCCCGACCTTCCAGCCTGT CTTTAGCAGCATGGGGCCACCTGCATCTGTGCCCTTGCTCCCTTCTTCAAGCAGACAACTACTCCCGCCAC CAGTCCATCCACAGACTCTGCTTCGAAGCCTGCGTTTGGCTTTGGCATAAACAGTGTGAGCAGCAGCAGTGTGAG TACCACGACCAGCACCGCCACTGCCGCCTCACAGCCTTTCCTCTTCGGGGCGCCCCAGGCCTCTGCTGCCAGCTT CACCCCGGCCATGGGCTCCATATTCCAGTTTGGCAAACCTCCTGCCTTGCCCACACCACCACAGTCACCACCTT CAGCCAGTCCCTGCCCACTGCCGTGCCAACGGCCACCAGCAGCAGCGCTGCCGACTTTAGTGGTTTTTGGCAGCAC CCTCGCCACCTCCGCCCCGGCCACCAGCCAGCCCACTCTGACGTTCAGTAACACGAGCACCCCCACGTTCAA CATTCCCTTTGGCTCAAGCGCCAAGTCCCCGCTCCCATCATATCCGGGAGCCAACCCCCAGCCCGCATTTGGGGC CGCTGAGGGGCAGCCACCGGGGGCCGCCAAGCCAGCCTTACCCCCAGCTTTGGCAGCTCTTTCACTTTTGGAAA CTCTGCAGCCCCGGCCCCGGCTACTGCACCCACACCTGCGCTCCACGATCAAGATCGTGCCTGCGCACGT GCCTACGCCCATCCAGCCTACCTTTGGCGGTGCCACGCACTCGGCGTTTGGATTGAAAGCCACGGCTTCCGCCTT CGGCGCTCCCGCCAGCTCACAGCCCGCCTTTGGCGGCTCCACTGCTGTCTTCTCCTTCGGTGCAGCCACCAGCTC CGGCTTTGGAGCCACCACCCAGACCGCCAGCAGCGGGAGCAGCTCGGTGTTTGGCAGCACAACACCATCACC CTTCACGTTTGGGGGTTCGGCAGCCCCCGCTGGCAGTGGGAGCTTTGGGATCAACGTGGCCACCCCAGGCTCCAG CGCCACCACCGGAGCTTTCAGCTTTGGAGCAGGACAGAGTGGGAGCACAGCCACCTCCACCCCTTCACAGGGGG CTTAGGTCAGAACGCCCTGGGCACCACCGGCCAGAGCACACCGTTTGCCTTCAACGTGGGCAGCACAACTGAGAG CAAACCTGTGTTTGGAGGCACCGCCACCCCACCTTTGGTCAGAACACCCCTGCGCCTGGAGTGGGCACATCGGG ${\tt CAGCAGCCTCTCCTTTGGGGCATCTTCAGCACCCGCCCAAGGCTTTGTTGGTGTTGGACCGTTCGGCAACACTTT}$

2501/6881 FIGURE 2299B

TGTGCAAGGCGGTGTGCAAGCACCGGCTGCGGCTCTTTGCTGTCTCTTTCTCTTTTGGGGCTGGGCTGGGTGT GCGTTCTGGTGCTGATGCTTTGGCCTGTGAGGCTGAGCTAGAGAAGTGTAGATGTTAGATGTGCCAGTACCATCC TGCGCCTCCCAAGCATGCCCCCACTCACTCACGTCGGCATCTCGACCCGTTCAATTACAGCAACGAAGAAGCCAC GGGCAGGCAGGCGGGAGCTAGCCTGCAAGAGAAACAGCCCCAATGCTGGGTAAGAGAGCAGTTCACCCCATCCC $\tt CCCCTCCACGACCCTGGCCCCCTGTACCTGAAGGCGCCCGGGTTCTGCTGCAGCGCATCTGGTACCATGT$ CTTCATTCTCCTCCTGGCAGAGGGAGCACATGGAGTAGACGAGCCGCTGCAGGGAAAGGGAAAGTGAGCGCGTGGC ACAGGGCTCGCTGCTGGAACCCTGCCAGGGCATGCAGACGCACCGGGCTAGGTGTCCCTGCCCCGGGATCCTCCA GCTGTCTGCTCGGCATACCTAAGGAAAAGCGTGTCTCGGTTACACAGCTTCACAGGCTGCCTCAGTCCTGAAATC CTCGCTCCTGAAATCCTTGCCTCACAGAGGAGAACTTTTGCTCCAGGGTCCCAAGCCCATTAAAGTGTCAGAACT AAGACCAAAACAGATGACTCCAGGTCTAAGCTGCTGTGGACCTCCGAGTCCCTCAGCCACGCCTTCTCACCATCT CACCCGAGCCACTGCAGGAAGGATCCAGCAGGACATAGTGGACCTCACGATAGCGCGGATCTAAGGGGGAACCG CCAGGAAGTCCTCCTCAGCCAGCTCACAGCAGGAGACGCCAACCCAGGCCAGCAGCGTGGCCATGGATGCCAGCC GC1TGGCATCCAGGTCAAAGGCAAAGATCTTCCTAGGGCAGAGGGCAGAGCAGGGGTGAGCTGAGCATGCACGGA GCAUCTAAGGGCC'IGTCACAGCTGACACAGACAACCAGAACATGCAGGTTAAGCCAGGACACACAATATTGAAAC GGCCTATATTTAAAGGGCCCAGGGTCAGAGGTAACTGGCCTGGGGTCTCTGCCCCAAGGGCTAAGGGATCCACAT CTCACACCTGCAGTGGGGAAAGCTTAGCTTGGGGCAAATACCGTGAACTACTTTGGTACAGCAGGAAAGAGTTAA GCGAAAGTCATCCTTTCAGCCTTTATTACCCACTGAAAGGCACAAAATCAAACCCCATGTCCTCCTCCTCCT CCTGTGGCACTCACCCTTGGTTCTTCAGAAGAGCAGCCAAGTGACTGGTCTTATTGCCTGGGGCGGCACAGGCAT CCGGGTAAACAGAGACCCCAGGCTAGGCCCTTCCCGTGCCTACACATTCTTCCCTTTTCTATTCCTCTTGCCTAC CAGCTCCGGCATCAAGGAGTCCAGGAGAAAATGCTTCCCCTTGAGGGCTTGTAAGTCATCAAGGCTGCCAGGGAA GAACCATTCATTCATTCCTGAATTTCTCCCTGCCAGGCCCTATTTCAACGGTCCATTCATGCAACAAATGTTAC CACAGCTATGGAGAAATCAACAGGGTGATAAGGGAATCCGGGATCCGCAGTTGAGGGAATGGGTTGTCAAGCCAG ACTGATGGGTCAGGAGCCCCCTCTACTGTTTACCAGCAGTGGGAGCCTGGGCAAGTGATTCAATCTCAAGCCCCA CTGGCATCTCTGTAAAATAGTAGGTGTGAGGATTCAATGAGCCAATATATCCAAGATACTTACGTGCCACAATTT AATAAATGTTAGCTATTCCTGTTGAAGCATAACCTTGGAGAAAGGTTACTTTACAGGGGGGTGAGGAGTGGGGAA GTGAGAGCTGAGCTCATTCTTGATGGATGAGGAGTTAGTCATGTGAGGCGCCTTAGGTTAAAACTACATTCACTAT AACTCAGTAAAGCAGTCCCGCCCACTCTCCGACCCATGCAGAAATAGGCCTAGAGAGTCACATGTCTCAGTTCAG AAATCTATCGAAGTGGCAGAGCTGGAATTCAAACACAAGCAGCCGTTCTCTGCTATTCCACCCTGGTGTCCAAGC AACATGGTAGGGCAGAAGGAAGGGATCTTACAAAGAGTAAGGGAAAGGGAGAGGGGCAGAGGCTGCTTCTCAGA GCCACCAAAGGACAAAATAAGACAGGTGTGAGCCCAGTGGAGGAGGCACGGGGCAGAGACCAGCCACTGTTGCTG GCACGCTGGTGCACGTAGCACTGTGGCAGATGGACCTGGAGAGGAAGCAGGAGGACAGCACAATGGAGCCAAGA ${\tt AAGGACTTAGCATGGCCGGGCGCGGTGGTTCATGCCTGTAATCCCAGCATTTTGGGAGGCCAAGGTGGGCAGATC}$ ${\tt ACCTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGAGAAATCCCGTCTCTACTAAAAATACAAAATTAGC.}$ CAGGCATGGTGCTGCATGCCTGCAATCCTGTAGGGAAAAGAAGAGAGATCAGACTGTTACTGTGTAGA CTTTGCCCCAAATTTGAGCTCACAAAAACATGTGTTGTATGGAATCAAGGTTTAAAGGATCTAGGGCTGTGCAGG ACATGCCTTGTTAATAAAACGTTTACAAGC

2502/6881 FIGURE 2300A

CAGCATCAATAAGGCCATTAATACGCAGGAAGTGGCTGTAAAGGAAAAACACGCCAGAACGTGCATACTGGGCAC CTGGAAGTTCTGCCATGTGTTCCACAAACTCCTCCGAGATGGACACCCGAACGTCCTGAAGGACTCTCTGAGATA CAGAAATGAATTGAGTGACATGAGCAGGATGTGGGGCCACCTGAGCGAGGGGTATGGCCAGCTGTGCAGCATCTA CCTGAAACTGCTAAGAACCAAGATGGAGTACCACACAAAAATCCCAGGTTCCCAGGCAACCTGCAGATGAGTGA $\tt CCGCCAGCTGGACGAGGCTGGAGAAAGTGACGTGAACAACTTTTTCCAGTTAACAGTGGAGATGTTTGACTACCT$ GGAGTGTGAACTCAACCTCTTCCAAACAGTATTCAACTCCCTGGACATGTCCCGCTCTGTGTCCGTGACGGCAGC AGGGCAGTGCCGCCTCGCCCGCTGATCCAGGTCATCTTGGACTGCAGCCACCTTTATGACTACACTGTCAAGCT TCTCTTCAAACTCCACTCCTGCCTCCCAGCTGACACCCTGCAAGGCCACCGGGACCGCTTCATGGAGCAGTTTAC AAAGTTGAAAGATCTGTTCTACCGCTCCAGCAACCTGCAGTACTTCAAGCGGCTCATTCAGATCCCCCAGCTGCC TGAGAACCCACCCAACTTCCTGCGAGCCTCAGCCCTGTCAGAACATATCAGCCCTGTGGTGGTGATCCCTGCAGA GGCCTCATCCCCCGACAGCGAGCCAGTCCTAGAGAAGGATGACCTCATGGACATGGATGCCTCTCAGCAGAATTT TGTGAACAAGGATGAGAAGGACCACTTAATTGAGCGACTATACAGAGAGATCAGTGGATTGAAGGCACAGCTAGA AAACATGAAGACTGAGAGCCAGCGGGTTGTGCTGCAGCTGAAGGGCCACGTCAGCGAGCTGGAAGCAGATCTGGC CGAGCAGCAGCACCTGCGGCAGCAGGCCGGCCGACGACTGTGAATTCCTGCGGGCAGAACTGGACGAGCTCAGGAG GCAGCGGGAGACACCGAGAAGGCTCAGCGGAGCCTGTCTGAGATAGAAAGGAAAGCTCAAGCCAATGAACAGCG ATATAGCAAGCTAAAGGAGAAGTACAGCGAGCTGGTTCAGAACCACGCTGACCTGCTGCGGAAGAATGCAGAGGT GACCAAACAGGTGTCCATGGCCAGACAAGCCCAGGTAGATTTGGAACGAGAGAAAAAAAGAGCTGGAGGATTCGTT GGAGCGCATCAGTGACCAGGGCCAGCGGAAGACTCAAGAACAGCTGGAAGTTCTAGAGAGCTTGAAGCAGGAACT TGCCACAAGCCAACGGGAGCTTCAGGTTCTGCAAGGCAGCCTGGAAACTTCTGCCCAGTCAGAAGCAAACTGGGC AGCCGAGTTCGCCGAGCTAGAGAAGGAGCGGGACAGCCTGGTGAGTGGCGCAGCTCATAGGGAGGAGGAATTATC TGCTCTTCGGAAAGAACTGCAGGACACTCAGCTCAAACTGGCCAGCACAGAGGAATCTATGTGCCAGCTTGCCAA AGACCAACGAAAAATGCTTCTGGTGGGGTCCAGGAAGGCTGCGGAGCAGGTGATACAAGACGCCCTGAACCAGCT TGAAGAACCTCCTCTCATCAGCTGCGCTGGGTCTGCAGATCACCTCCTCTCCACGGTCACATCCATTTCCAGCTG CATCGAGCAACTGGAGAAAAGCTGGAGCCAGTATCTGGCCTGCCCAGAAGACATCAGTGGACTTCTCCATTCCAT AACCCTGCTGGCCCACTTGACCAGCGACGCCATTGCTCATGGTGCCACCACCTGCCTCAGAGCCCCACCTGAGCC TGCCGACTCACTGACCGAGGCCTGTAAGCAGTATGGCAGGGAAACCCTCGCCTACCTGGCCTCCCTGGAGGAAGA GGGAAGCCTTGAGAATGCCGACAGCACAGCCATGAGGAACTGCCTGAGCAAGATCAAGGCCATCGGCGAGGAGCT CCTGCCCAGGGGACTGGACATCAAGCAGGAGGAGCTGGGGGACCTGGTGGACAAGGAGATGGCGGCCACTTCAGC TGCTATTGAAACTGCCACGGCCAGAATAGAGGAGATGCTCAGCAAATCCCGAGCAGGAGACACAGGAGTCAAATT GGAGGTGAATGAAAGGATCCTTGGTTGCTGTACCAGCCTCATGCAAGCTATTCAGGTGCTCATCGTGGCCTCTAA GGACCTCCAGAGAGAGATTGTGGAGAGCGGCAGGGGTACAGCATCCCCTAAAGAGTTTTATGCCAAGAACTCTCG ATGGACAGAAGGACTTATCTCAGCCTCCAAGGCTGTGGGCTGGGGAGCCACTGTCATGGTGGATGCAGCTGATCT GGTGGTACAAGGCAGAGGGAAATTTGAGGAGCTAATGGTGTTCTCATGAAATTGCTGCTAGCACAGCCCAGCT TGTGGCTGCATCCAAGGTGAAAGCTGATAAGGACAGCCCCAACCTAGCCCAGCTGCAGCAGGCCTCTCGGGGAGT CTTCTCAAGCATGACGCTGACACAGATCAAACGCCAAGAGATGGATTCTCAGGTTAGGGTGCTAGAACAAAAA TGAATTGCAGAAGGAGCGTCAAAAACTGGGAGAGCTTCGGAAAAAGCACTACGAGCTTGCTGGTGTTGCTGAGGG CTGGGAAGAAGGAACAGAGCCATCTCCACCTACACTGCAAGAAGTGGTAACCGAAAAAGAATAGAGCCAAACCAA CACCCCATATGTCAGTGTAAATCCTTGTTACCTATCTCGTGTGTTATTTCCCCAGCCACAGGCCAAATCCTTG ATAGCGACACCCTTTCTGTTTGGACCCATGGTCATCTCTGTTCTTTTCCCGCCTCCCTAGTTAGCATCCAGGCTG GCCAGTGCTGCCCATGAGCAAGCCTAGGTACGAAGAGGGGTGGTGGGGGGCAGGGCCACTCAACAGAGAGACCA CAAACTTGTGAGCATCAGAGGGCTGATGGATTCCAAACCAGGACACTACCCTGAGATCTGCACAGTCAGAAGGAC GGCAGGAGTGTCCTGGCTGTGAATGCCAAAGCCATTCTCCCCCTCTTTGGGCAGTGCCATGGATTTCCACTGCTT

2503/6881 FIGURE 2300B

GGCACACCCCTGGGGCTGAGTCTCCAGGGCCCCCCAACTGTGGTAGCTCCAGCGATGGTGCTGCCCAGGCCTCTC CCTCTGTCCGCCTTTACAAGGGAGAGACAACAGAAGAGGGGACAAGAGGGTTCACACAGCCCAGTTCCCGTGAC GAGGCTCAAAAACTTGATCACATGCTTGAATGGAGCTGGTGAGATCAACAACACTACTTCCCTGCCGGAATGAAC TGTCCGTGAATGGTCTCTGTCAAGCGGGCCGTCTCCCTTGGCCCAGAGACGGAGTGTGGGAAGTGATTCCCAACTC CTTTCTGCAGACGTCTGCCTTGGCATCCTCTTGAATAGGAAGATCGTTCCACCTTCTACGCAATTGACAAACCCG CTCCCTTAAGCAGCAACAGCCTACAAAGAGATGCTTGGAGCAATCAGAACTTCAGGTGTGACTCTAGCAAGGCTC ATCTTTCTGCCCGGCTACATCAGCCTTCAAGAATCAGAAGAAAGGCCAAGGTGCTGGACTGTTACTGACTTGGAT CCCAAAGCAAGGAGATCATTTGGAGCTCTTGGGTCAGAGAAAATGAGAAAAGGACAGAGCCAGCGGCTCCAACTCC TTTCAGCCACATGCCCCAGGCTCTCGCTGCCCTGTGGACAGGATGAGGACAGAGGGCACATGAACAGCTTGCCAG GGATGGGCAGCCCAACAGCACTTTTCCTCTTCTAGATGGACCCCAGCATTTAAGTGACCTTCTGATCTTGGAAAA ACAGCGTCTTCCTTTATCTATAGCAACTCATTGGTGGTAGCCATCAAGCACTTCCCAGGATCTGCTCCAACA TAGCCCACCCCCCCCCAACTCCCTCTCTGTGCATTTTCTAAGTGGGACATTCAAAAAACTCTCTCCCAGGACC TCGGATGACCATACTCAGACGTGTGACCTCCATACTGGGCTAAGGAAGTATCAGCACTAGAAATTGGGCAGTCTT AATGTTGAATGCTGCTTTCTGCTTAGTATTTTTTTGATTCAAGGCTCAGAAGGAATGGTGCGTGGCTTCCCTGTC CCAGTTGTGGCAACTAAACCAATCGGTGTGTTCTTGATGCGGGTCAACATTTCCAAAAGTGGCTAGTCCTCACTT CTAGATCTCAGCCATTCTAACTCATATGTTCCCAATTACCAAGGGGTGGCCGGGCACAGTGGCTCACGCCTGTAA TCCCAGCACTTTGAGAGGCTGAGGTGGGAGGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTGTCCAACATGGT GAAACCCCCATCTCTACTAAAAATACCAAAAATTAGCCGAGCGTAGTGACGGGTGCCCGTAATCCCAGCTACTCA GGAGGCTGAGACAGGAGAATCACCTGAACCCCAGAGGCAGAGGTTGCAGTGAGCTGAGATCACGCCATTGTACTC ATGGATCAAATTAAGATTCTCTGCCCAGCCGGGCACAGTGGCGCATGCCTGTAATCCCAGAACTTTGGGAGGCCA AGACGGGATGATTGCTTGAGCTCAGGAGTTTGAGACCAGGCTGGGCATCATAGCAAGACCTCATCTCTACTAAAA TTCAAAAACAAAATTAGCCGGGCATGATGGTGCATGCCTGTAGTCTCAGCTAGTTGGGGAGCTAAGGTGGGAGAA TTGCTTGAGCTTGGGAAGTCGAGGCTGCAGTCAGCCCTGATTGTGCCAGTGCACTCCGGCCTGGGTGACAGAGTG AGACCCTGTCTCAAAAAAAAAAGATTCTGTGTCAGAGCCCAGCCCAGGAGTTTGAGGCTGCAATGAGCCATGAT ATCCTGTCTCTAAAAAGAAGCCACAGAAATGTTTAAAAACTTCATCGACTTAGCCTGAGTCATAACGGTTAAGAA AGCACTTAAACAGAAGCAGAGGCTAATTCAGTGTCACATGAGGAAGTAGCTGTCAGATGTCACATAATTACTTTC GTAATAGCTCAGATTAGAATGGCTACCCCATTCTCTAGACAAAATCAAATTGTCCTATTGTGACTCTTCTAAAAA TGAAGATGAAGAGCTATTTAATGACACCTTGGATTAAAACGGGAATCACATCTTAAAGCTAAAAATGAACCTG CAAGCCTTCTAAATGAGTCACTGAGCATCACTAGTGACAAGTCTCGGGTGAGCGTAAATGGGTCATGACAAGATG GGACAGCAACAAAATCATGGCTTAGGATCGACAAGAAGTTAAAAAAACAGCTGCATCTGTTACTTAAGTTTGTAAG ACAGTGCCCTGAGACCTCTAGAGAAAAGATGTTTGTTTACATAAGAGAAAAGAGGCCAGACATGGTGTCTCACACG TTTAATCCCAGCACTTTGGGAGGCAGGGGGGGGGTGGATCACCTGAGGTCAGGAGTTCAAGACTAGCCTGGCCAAC ATGGTGAAACCCCGTCTCTACTAAAAATACAAAAATTAGCCGGGCATGGTGGCAGGCGCCTATAATCCCAGCTAC TGGGGAGGCTGAGGCAGGAGAATC

FIGURE 2301

ATGGGGCGGGCCTCTGGGAGGCGTGGCCTCCGGCCGGCTCCTCTGCTGTTGCCAAGGGAAACTGCCGCGAGGAG CCCGGGTGTCGCAGCTGGTGCTTGTTGTCCCGAGGTGCCATCCGCCACCTTCTTCACTGCGCTGCTCCTCGCTGCTG GTTTCCGGGCCTCGCCTGTTCCTGCTGCAGCAGCCCCTGGCGCCCTCGGGCCTCACGCTGAAGTCCGAGGCCCTT CGCAACTGGCAAGTTTACAGGCTGGTAACCTACATCTTTGTCTACGAGAATCCCATCTCCCTGCTCTGCGGCGCT ATCATCATCTGGCGCTTTGCTGGCAATTTCGAGAGAACCGTGGGCACCGTCCGCCACTGCTTCTTCACCGTGATC TTCGCCATCTTCTCCGCTATCATCTTCCTGTCATTCGAGGCTGTGTCATCACTGTCAAAGCTGGGGGAAGTGGAG CTGGTGTTTGGCATGGTTGTGCCCTCAGTCCTGGTTCCGTGGCTCCTGGTGGCTCGTGGCTCATTCCCCAG ACCTCTTTCCTCAGTAATGTCTGCGGGCTGTCCATCGGGCTGGCCTATGGCCTCACCTACTGCTATTCCATCGAC CTCTCAGAGCGAGTGGCACTGAAGCTCGATCAGACCTTCCCCTTCAGCCTGATGAGGAGGATATCCGTGTTCAAG TACGTCTCAGGGTCTTCAGCCGAGAGGGGGGGCAGCCCAGAGCCGGAAACTGAACCCGGTGCCTGGCTCCTACCCC ACACAGAGCTGCCACCCTCACCTGTCCCCAAGCCACCCTGTGTCCCAGACGCAGCACGCCAGTGGTCAGAAGCTG GTGCAGAACCACTTTGGTCCAAACCCCACCTCCTCCAGTGTCTACCCAGCTTCTGCGGGCACCTCCCTGGGCATC AAGGAGTCCTCCAGGGTCCCCATGCCCTGAGAGAATTTCTAGGGAAGTCATCTCACTTGGCCTTCTGAAGGTCCT CCCTAAGAGTCTCCTGACAAAAGTTACTTATTGA

GTTTCATGATCAACATGGGAGACTCCCACGTGGACACCAGCTCCACCGTGTCCGAGGCGGTGGCCGAAGAAGTAT CTCTTTTCAGCATGACGGACATGATTCTGTTTTCGCTCATCGTGGGTCTCCTAACCTACTGGTTCCTCTTCAGAA AAAAGATGAAGAAAACGGGGAGGAACATCATCGTGTTCTACGGCTCCCAGACGGGGACTGCAGAGGAGTTTGCCA ACCGCCTGTCCAAGGACGCCCACCGCTACGGGATGCGAGGCATGTCAGCGGACCCTGAGGAGTATGACCTGGCCG ACCTGAGCAGCCTGCCAGAGATCGACAACGCCCTGGTGGTTTTCTGCATGGCCACCTACGGTGAGGGAGACCCCA TTGGTCTTGGGAACAAGACCTACGAGCACTTCAATGCCATGGGCAAGTACGTGGACAAGCGGCTGGAGCAGCTCG GCGCCCAGCGCATCTTTGAGCTGGGGTTGGGCGACGACGATGGGAACTTGGAGGAGGACTTCATCACCTGGCGAG AGCAGTTCTGGCCGGCCGTGTGTGAACACTTTGGGGTGGAAGCCACTGGCGAGGAGTCCAGCATTCGCCAGTACG AGCTTGTGGTCCACACCGACATAGATGCGGCCAAGGTGTACATGGGGGGAGATGGGCCGGCTGAAGAGCTACGAGA ACCAGAAGCCCCCTTTGATGCCAAGAATCCGTTCCTGGCTGCAGTCACCACCAACCGGAAGCTGAACCAGGGAA CCGAGCGCCACCTCATGCACCTGGAATTGGACATCTCGGACTCCAAAATCAGGTATGAATCTGGGGACCACGTGG CTGTGTACCCAGCCAACGACTCTGCTCTCGTCAACCAGCTGGGCAAAATCCTGGGTGCCGACCTGGACGTCGTCA TGTCCCTGAACAACCTGGATGAGGAGTCCAACAAGAAGCACCCATTCCCGTGCCCTACGTCCTACCGCACGGCCC TCACCTACTACCTGGACATCACCAACCCGCCGCGTACCAACGTGCTGTACGAGCTGGCGCAGTACGCCTCGGAGC CCTCGGAGCAGGAGCTGCTGCGCAAGATGGCCTCCTCCTCCGGCGAGGGCAAGGAGCTGTACCTGAGCTGGGTGG TGGAGGCCCGGAGGCACATCCTGCCATCCTGCAGGACTGCCCGTCCCTGCGGCCCCCCATCGACCACCTGTGTG AGCTGCTGCCGCCCTGCAGGCCCGCTACTACTCCATCGCCTCATCCTCCAAGGTCCACCCCAACTCTGTGCACA CCAAGGAGCCTGCCGGGGAGAACGGCGGCCGTGCGCTGGTGCCCATGTTCGTGCGCAAGTCCCAGTTCCGCCTGC CCTTCAAGGCCACCACGCCTGTCATCATGGTGGGCCCCGGCACCGGGGTGGCACCCTTCATAGGCTTCATCCAGG AGGACTACCTGTACCGGGAGGAGCTGGCGCAGTTCCACAGGGACGGTGCGCTCACCCAGCTCAACGTGGCCTTCT CCCGGGAGCAGTCCCACAAGGTCTACGTCCAGCACCTGCTAAAGCAAGACCGAGAGCACCTGTGGAAGTTGATCG AAGGCGGTGCCCACATCTACGTCTGTGGGGATGCACGGAACATGGCCAGGGATGTGCAGAACACCTTCTACGACA TCGTGGCTGAGCTCGGGGCCATGGAGCACGCGCAGGCGGTGGACTACATCAAGAAACTGATGACCAAGGGCCGCT TGGCTCCCTCCCGTAGTCTCCTGGGTGTGTTTGGCTTGGCCTTGGCATGGGCGCAGGCCCAGTGACAAAGACTCC TCTGGGCCTGGGGTGCATCCTCCTCAGCCCCCAGGCCAGGTGAGGTCCACCGGCCCCTGGCAGCACAGCCCAGGG CCTGCATGGGGGCACCGGGCTCCATGCCTCTGGAGGCCTCTGGCCCTCGGTGGCTGCACAGAAGGGCTCTTTCTC GAATAAAGTTCTGTTTTCTGT

MTDMILFSLIVGLLTYWFLFRKKKEEVPEFTKIQTLTSSVRESSFVEKMKKTGRNIIVFYGSQTGTAEEFANRLS KDAHRYGMRGMSADPEEYDLADLSSLPEIDNALVVFCMATYGEGDPTDNAQDFYDWLQETDVDLSGVKFAVFGLG NKTYEHFNAMGKYVDKRLEQLGAQRIFELGLGDDDGNLEEDFITWREQFWPAVCEHFGVEATGEESSIRQYELVV HTDIDAAKVYMGEMGRLKSYENQKPPFDAKNPFLAAVTTNRKLNQGTERHLMHLELDISDSKIRYESGDHVAVYP ANDSALVNQLGKILGADLDVVMSLNNLDEESNKKHPFPCPTSYRTALTYYLDITNPPRTNVLYELAQYASEPSEQ ELLRKMASSSGEGKELYLSWVVEARRHILAILQDCPSLRPPIDHLCELLPRLQARYYSIASSSKVHPNSVHICAV VVEYETKAGRINKGVATNWLRAKEPAGENGGRALVPMFVRKSQFRLPFKATTPVIMVGPGTGVAPFIGFIQERAW LRQQGKEVGETLLYYGCRRSDEDYLYREELAQFHRDGALTQLNVAFSREQSHKVYVQHLLKQDREHLWKLIEGGA HIYVCGDARNMARDVQNTFYDIVAELGAMEHAQAVDYIKKLMTKGRYSLDVWS

WO 2004/030615 PCT/US2003/028547

2507/6881 FIGURE 2304

 $\tt CGCCCCGGGCCCGCTGGGCGACTGCCTGCGGGACTGGGAGGATCTACAGCAGGACTTCCAGAACATCCAGGAGA$ ${\tt CCGCACAGGAGCTGGAGAACCAGATGAAAGAGCGCCAAGGCCTCTTCTTTGACATGGAGGCCTATTTGCCTAAGA}$ ACAAGGACGAGTATGAGAAGTTCAAGCTCTACCTCACCATCCTCATCCTCATCTCCTTCACTTGCCGCTTCC TGCTCAACTCCAGGGTGACAGATGCTGCCTTCAACTTCCTGCTGGTCTGGTACTACTGCACCCTGACCATCCGGG AGAGCATCCTCATCAACAACGGCTCCCGGATCAAAGGCTGGTGGGGTGTTCCATCACTACGTGTCCACCTTCCTGT $\tt CGGGAGTCATGCTGACGTGGCCCGACGGTCTCATGTACCAGAAATTCCGGAACCAATTCCTCTCTTTTCCATGT$ ACCAGAGCTTCGTGCAGTTCTCCAGTACTACCAGAGCGGCTGCCTCTACCGCCTGCGGGCGCTGGGCGAGC GGCACACCATGGACCTCACTGTGGAGGGCTTCCAGTCCTGGATGTGGCGGGGCCTCACCTTCCTGCTGCCTTTTC TTTTCTTTGGACACTTCTGGCAGCTTTTTAACGCGCTGACGTTGTTCAACCTGGCCCAGGACCCTCAGTGCAAGG AGTGGCAGGTGCTTATGTGCGGCTTTCCCTCCTCCTTCTTCCTCGGCAATTTCTTCACCACCCTGAGGGTTG

WO 2004/030615 PCT/US2003/028547

2508/6881 FIGURE 2305

MQPPPPGPLGDCLRDWEDLQQDFQNIQETHRLYRLKLEELTKLQNNCTSSITRQKKRLQELALALKKCKPSLPAE AEGAAQELENQMKERQGLFFDMEAYLPKKNGLYLSLVLGNVNVTLLSKQAKFAYKDEYEKFKLYLTIILILISFT CRFLLNSRVTDAAFNFLLVWYYCTLTIRESILINNGSRIKGWWVFHHYVSTFLSGVMLTWPDGLMYQKFRNQFLS FSMYQSFVQFLQYYYQSGCLYRLRALGERHTMDLTVEGFQSWMWRGLTFLLPFLFFGHFWQLFNALTLFNLAQDP QCKEWQVLMCGFPFLLLFLGNFFTTLRVVHHKFHSQRHGSKKD

AGAACAATGCTAAAGTAGCTGTGCTAGGGGCCTCTGGAGGCATCGGGCAGCCACTTTCACTTCTCCTGAAGAACA GCCCCTTGGTGAGCCGCCTGACCCTCTATGATATCGCGCACACCCCGGAGTGGCCGCAGATCTGAGCCACATCG AGACCAAAGCCGCTGTGAAAGGCTACCTCGGACCTGAACAGCTGCCTGACTGCCTGAAAGGTTGTGATGTGGTAG TTATTCCGGCTGGAGTCCCCAGAAAGCCAGGCATGACCCGGGACGACCTGTTCAACACCAATGCCACGATTGTGG CCACCCTGACCGCTGCCTGTGCCCAGCACTGCCCGGAAGCCATGATCTGCGTCATTGCCAATCCGGTTAATTCCA CCATCCCCATCACAGCAGAAGTTTTCAAGAAGCATGGAGTGTACAACCCCAACAAAATCTTCGGCGTGACGACCC TGGACATCGTCAGAGCCAACACCTTTGTTGCAGAGCTGAAGGGTTTGGATCCAGCTCGAGTCAACGTCCCTGTCA TTGGTGGCCATGCTGGGAAGACCATCATCCCCCTGATCTCTCAGTGCACCCCCAAGGTGGACTTTCCCCAGGACC AGCTGACAGCACTCACTGGGCGGATCCAGGAGGCCGGCACGGAGGTGGTCAAGGCTAAAGCCGGAGCAGGCTCTG TTGTGGAATGTTCCTTCGTTAAGTCACAGGAAACGGAATGTACCTACTTCTCCACACCGCTGCTTGGGAAAA AGGGCATCGAGAAGAACCTGGGCATCGGCAAAGTCTCCTCTTTTGAGGAGAAGATGATCTCGGATGCCATCCCCG ${\tt AGCTGAAGGCCTCCATCAAGAAGGGGGAAGATTTCGTGAAGACCCTGAAG{\tt TGA}GCCGCTGTGACGGGTGGCCAGT}$ TTCCTTAATTTATGAAGGCATCATGTCACTGCAAAGCCGTTGCAGATAAACTTTGTATTTTAATTTGCTTTGGTG

MLSALARPASAALRRSFSTSAQNNAKVAVLGASGGIGQPLSLLLKNSPLVSRLTLYDIAHTPGVAADLSHIETKA AVKGYLGPEQLPDCLKGCDVVVIPAGVPRKPGMTRDDLFNTNATIVATLTAACAQHCPEAMICVIANPVNSTIPI TAEVFKKHGVYNPNKIFGVTTLDIVRANTFVAELKGLDPARVNVPVIGGHAGKTIIPLISQCTPKVDFPQDQLTA LTGRIQEAGTEVVKAKAGAGSATLSMAYAGARFVFSLVDAMNGKEGVVECSFVKSQETECTYFSTPLLLGKKGIE KNLGIGKVSSFEEKMISDAIPELKASIKKGEDFVKTLK

WO 2004/030615 PCT/US2003/028547

2512/6881 FIGURE 2309

MTERRVPFSLLRGPSWDPFRDWYPHSRLFDQAFGLPRLPEEWSQWLGGSSWPGYVRPLPPAAIESPAVAAPAYSR ALSRQLSSGVSEIRHTADRWRVSLDVNHFAPDELTVKTKDGVVEITGKHEERQDEHGYISRCFTRKYTLPPGVDP TQVSSSLSPEGTLTVEAPMPKLATQSNEITIPVTFESRAQLGGPEAAKSDETAAK

2515/6881 FIGURE 2312A

GGACTGCGAAAGGAGCAGGGTTGCGGAGCTAGGGCTCCAGCCTGCGGCCGCGCATTCTTGCGTCTGGCCAGCCGC GAGCTCTAAGGGTCGGCCCGGCCCGGCCCCCGCGGCTCCCTGCCAGGCTCTCGCGGGCGCGCTCGGGGTGG GGCCTCGCGGCTGGCGGAGATGCGGCCGGGGCTGCGCGGTGGTGATGCGAGCCTGCAGGGCGGCGCCCCGGGGCA GCCGGAGCCGCGCGCGCGCGCTGTAATCGGACACCAAGAGCGCTCGCCCCCGGCCTCCGGCCACTTTCCATTC ACTCCGAGGTGCTTGATTGAGCGACGCGGAGAAGAGCTCCGGGTGCCGCGGCACTGCAGCGCTGAGATTCCTTTA CAAAGAAACTCAGAGGACCGGGAAGAAAGAATTTCACCTTTGCGACGTGCTAGAAAATAAGGTCGTCTGGGAAAA AACCAAGACCTCTGAATACTTCAGCCTTTCCCACCATCCTTTAGACTACAGGATTTTATTAATGGATGAAGATCA GGACCGGATATATGTGGGAAGCAAAGATCACATTCTTTCCCTGAATATTAACAATATAAGTCAAGAAGCTTTGAG GAACTTTGTCCGTGTAATTCAGACTTTCAATCGCACACATTTGTATGTCTGTGGGAGTGGCGCTTTCAGTCCTGT CTGTACTTACTTGAACAGAGGGAGGAGCAAGGACCAAGTTTTCATGATTGACTCCAAGTGTGAATCTGGAAA AGGACGCTGCTCTTTCAACCCCAACGTGAACACGGTGTCTGTTATGATCAATGAGGAGCTTTTCTCTGGAATGTA TATAGATTTCATGGGGACAGATGCTGCTATTTTTCGAAGTTTAACCAAGAGGAATGCGGTCAGAACTGATCAACA TAATTCCAAATGGCTAAGTGAACCTATGTTTGTAGATGCACATGTCATCCCAGATGGTACTGATCCAAATGATGC TCGAATATGTCCTAATGACACTGGTGGACTGCGTAGCCTTGTCAACAAGTGGACCACTTTCTTAAAGGCGAGGCT GGTGTGCTCGGTAACAGATGAAGACGGCCCAGAAACACACTTTGATGAATTAGAGGATGTGTTTCTGCTGGAAAC TGATAACCCGAGGACAACACTAGTGTATGGCATTTTTACAACATCAAGCTCAGTTTTCAAAGGATCAGCCGTGTG TGTGTATCATTTATCTGATATACAGACTGTGTTTAATGGGCCTTTTGCCCACAAAGAAGGGCCCAATCATCAGCT GATTTCCTATCAGGGCAGAATTCCATATCCTCGCCCTGGAACTTGTCCAGGAGGAGCATTTACACCCAATATGCG AACCACCAAGGAGTTCCCAGATGATGTTGTCACTTTTATTCGGAACCATCCTCTCATGTACAATTCCATCTACCC AATCCACAAAAGGCCTTTGATTGTTCGTATTGGCACTGACTACAAGTATACAAAGATAGCTGTGGATCGAGTGAA CGCTGCTGATGGGAGATACCATGTCCTGTTTCTCGGAACAGATCGGGGTACTGTGCAAAAAGTGGTTGTTCTTCC TACTAACAACTCTGTCAGTGGCGAGCTCATTCTGGAGGAGCTGGAAGTCTTTAAGAATCATGCTCCTATAACAAC AATGAAAATTTCATCTAAAAAGCAACAGTTGTATGTGAGTTCCAATGAAGGGGTTTCCCAGGTATCTCTGCACCG CTGCCACATCTATGGTACAGCCTGTGCTGACTGCTGCCTGGCGGGGACCCTTATTGCGCCTGGGATGGCCATTC CTGTTCCAGATTCTACCCAACTGGGAAACGGAGGAGCCGAAGACAAGATGTGAGACATGGAAACCCACTGACTCA TTTTCTGGAGTGTGCCCCCAAGTCTCCGCAGGCATCTATCAAGTGGCTGTTACAGAAAGACAAAGACAGAGGAGGAA AGAGGTTAAGCTGAATGAACGAATAATAGCCACTTCACAGGGACTCCTGATCCGCTCTGTTCAGGGTTCTGACCA AGGACTTTATCACTGCATTGCTACAGAAAATAGTTTCAAGCAGACCATAGCCAAGATCAACTTCAAAGTTTTAGA TTCAGAAATGGTGGCTGTTGTGACGGACAAATGGTCCCCATGGACCTGGGCCAGCTCTGTGAGGGCTTTACCCTT CCACCCGAAGGACATCATGGGGGCATTCAGCCACTCAGAAATGCAGATGATTAACCAATATTGCAAAGACACTCG GCAGCAACATCAGCAGGGAGATGAATCACAGAAAATGAGAGGGGACTATGGCAAGTTAAAGGCCCTCATCAATAG TCGGAAAAGTAGAAACAGGAGGAATCAGTTGCCAGAGTCATAATATTTTCTTATGTGGGTCTTATGCTTCCATTA ACAAATGCTCTGTCTTCAATGATCAAATTTTGAGCAAAGAAACTTGTGCTTTACCAAGGGGAATTACTGAAAAAG TTTCTTCAAAATCGATATGGTGGCTGCAAAACTAGAATTGTTGCATCCCTCAATTGAATGAGGGCCATATCCCTG TGGTATTCCTTTCCTGCTTTGGGGCTTTAGAATTCTAATTGTCAGTGATTTTGTATATGAAAACAAGTTCCAAAT CCACAGCTTTTACGTAGTAAAAGTCATAAATGCATATGACAGAATGGCTATCAAAAGAAATAGAAAAGGAAGACA GCATTTAAAGTTGTATAAAAACATGAGTTATTCATAAAGAGAAAATGATGAGTTTTTATGGTTCCAATGAAATAT GTTGGGGTTTTTTTAAGATTGTAAAAATAATCAGTTACTGGTATCTGTCACTGACCTTTGTTTCCTTATTCAGGA AGATAAAAATCAGTAACCTACCCCATGAAGATATTTGGTGGGAGTTATATCAGTGAAGCAGTTTGGTTTATATTC TTATGTTATCACCTTCCAAACAAAAGCACTTACTTTTTTTGGAAGTTATTTTTTTAGACTCAAAGAATATAATC

2516/6881 FIGURE 2312B

TGGCACTACTCAGTTATTACTGTTTGTTCTCTTATTCCCTAGTCTGTGTGGCAAATTAAACAATATAAAGAAGGAA AAATTTGAAGTATTAGACTTCTAAATAAGGTGTGAAATCATCAAAAAGAAAAATCAAAGTAGAAACTACTAATTT TTTAAGAGGAATTTATAACAAATATGGCTAGTTTTCAACTTCAGTACTCAAATTCAATGATTCTTCCTTTTATTA AAACCAGTCTCAGATATCATACTGATTTTTAAGTCAACACTATATATTTTATGATCTTTTCAGTGTGATGGCAAG GTGCTTGTTATGTCTAGAAAGTAAGAAAACAATATGAGGAGACATTCTGTCTTTCAAAAGGTAATGGTACATACG TAATTTTATTAGAATAATTTCATACTGAAATTATTTTCTCCAAATAAAAATTAGATGGAAAAATGTGAAAAAAAT ATGATGAAGGTAATTAAAGTAGATTATGGCCTTTTTAAGTATTGCAGTCTAAAACTTCAAAAACTAAAATCATTG TCAAAATTAATATGATTATTAATCAGAATATCAGAATATGATTCACTATTTAAACTATGATAAATTATGATAATA TATGAGGAGGCCTCGCTATAGCAAAAATAGTTAAAATGCTGACATAACACCAAACTTCATTTTTTAAAAAATCTG TTGTTCCAAATGTGTATAATTTTAAAGTAATTTCTAAAGCAGTTTATTATAATGGTTTGCCTGCTTAAAAGGTAT AATTAAACTTCTTTTCTCTTCTACATTGACACACAGAAATGTGTCAATGTAAAGCCAAAACCATCTTCTGTGTTT ATGGCCAATCTATTCTCAAAGTTAAAAGTAAAATTGTTTCAGAGTCACAGTTCCCTTTATTTCACATAAGCCCAA AATTGTGTACACTTTCATTACTTTTAAAAATGTAGAAATTCTTCATGAACATAACTCTGCTGAATGTAAAAGAAA GTGACTTAATATCTATTCCATTTGTATTGTACATAAAATTTTCTAGAAATACACTTTTTTCCAAAGTGTAAGTTT GTTGTCACACTAAAATTTAATTGGATATTGATGAAATCATTGGCCTGGCAAAATAAAACATGTTGAATTCCCC

CTTTCTGTCTTGATGACCTGTCTAGTGCTATAAATGAACACCTTTCTGCCCGTGGACGCCGCCGAAGAAGCATCG TTAAAGTCTCTCTCTCCCTGCCGTCATGTCTAAGTCAGAGTCTCCTAAAGAGCCCAAACAGCTGAGGAAGCTCT TCATTGGAGGGTTGAGCTTTGAAACAACCAATGAGAGTCTGAGGAGCCATTTTGAGCAATGGGGAACGCTCATGG ACTGTGTGGTAATGAGAGATCCAAACACCAAGTGCTCCAGGGGCTTTGGGTTTGTCACATATGCCACTGTGGAGG GAGAAGATTCTCAAAGACCAGGTGCCCACTTAACTGTGAAAAAGATATTTGTTGGTGGCATTAAAGAAGACACCA GTGGCAAGAAAAGGGGCTTTGCCTTTGTAACCTTTGACGACCATGACTCTGTGGATAAGATTGTCATTCAGAAAT ACCATACTGTGAATGGCCACATCTGTGAAGTTAGGAAAGCCCTGTCAAAGCAAGAGATGGCGAGTACTTCATCCA GCCAAAGAGGTCAAAGTGGTTCTGGAAACTTTAGTGGTGGTCGTGGAGGTGGTTTCAGTGGGAATGACAACTTTG GTCATGGAGGAAACTTCAGTGGTGGTGGCTTTGGTGGCAGCCGTGGTGCTGGTGGATATGGTGGCAGTGGGG ATGGCTATAATGGATTTGGTAATGATGGAAGCAATTTTGGAGGTGGTGGAAGCTACAATGATTTTGGCAATTACA ACAATCAGTCTTCAAATTTTAGACCCATGAAGGGAGGAAATTTTGGAGGCAGAAGCTCTGGCCCCTATGGCGGTG GAGGCAATACTTTGCAAAACCAAGGTGGCTATGGCAGTTCCAGCAGCAGCAGTAGCTATGGCAGTGGCAGAAGAT TTTAATTAGGAAACAAAGCTTAGCAGGAGAGGAGAGCCAGAGAAGTGACAGGGAAGCTACAGGTTACAAGAGATT ${\tt TGTGAACTCAGCCAAGCACAGTGGTGGCAGGGCCTAGCTGCTACAAAGAAGACGTGTTTTAGACACATACTCATG}$ TGTATGGGCAAAAAACTCGAGGACTGTATTTGTGACTAGCTGTATAACAGGTTATTTTAATTTCTATTCTGCGGA TAGTCTGATTGTGACACTGAATAAATGTCTTTTTT

MSKSESPKEPKQLRKLFIGGLSFETTNESLRSHFEQWGTLMDCVVMRDPNTKCSRGFGFVTYATVEEVDAAMNAR PHKVDGRVVESKRAVSREDSQRPGAHLTVKKIFVGGIKEDTKEHHLRDYFEQYGKIEVIEIMTDRGSGKKRGFAF VTFDDHDSVDKIVIQKYHTVNGHICEVRKALSKQEMASTSSSQRGQSGSGNFVVEATMILAITTISLQILDP

CCTTTCTGCCCGTGGACGCCGCCGAAGAAGCATCGTTAAAGTCTCTCTTCTCCCTGCCGTCATGTCTAAGTCAGA
GTCTCCTAAAGAGCCCAAACAGCTGAGGAAGCTCTTCATTGGAGGGTTGAGCTTTGAAACAACCAATGAGAGTCT
GAGGAGCCATTTTGAGCAATGGGGAACGCTCATGGACTGTGTGTAATGAGAGATCCAAACACCAAGTGCTCCAG
GGGCTTTGGGTTTGTCACATATGCCACTGTGGAGGAGGTGGATGCAGCTATGAATGCAAGGCCACACAAGGTGGA
TGGAAGAGTTGTGGAATCAAAGAGAGCTGTTTCAAGAGAAGATTCTCAAAGACCAGGTGCCCACTTAACTGTGAA
AAAGATATTTGTTGGTGGCATTAAAGAAGACACCAAAGAACATCACCTAAGAGATTATTTTGAACAGTATGTGGA
AGCAATTTTGGAGGTGGTGGAAGCTACAATGATTTTTGGCAATTACAACAATCAGTCTTCAAATTTTTAGACCCATG
AAGGGAGGAAATTTTGGAGGCAGAAGCTCTGGCCCCTATGGCGGTGGAGGCAATACTTTGCAAAACCAAGGTGGC
TATGGCAGTTCCAGCAGCAGCAGCAGTAGCTATGGCAGTACAAGAATTTTAATTAGGAAACAAAGCTTAGCAGGAG
AGGAGAGCCAGAGAAGTGACAGGGAAGCTTACAAGAGATTTTAATTAGGAAACAAAGCTTAGCAGGAG
AGGAGAGCCAGAGAAGTGACAGGGAAGCTTACAAGAGATTTTGTGAACTCAGCCAAGCACAGTGGTGGCA
GGGCCTAGCTG

FIGURE 2317

ATGCCAAACTATGTCACCTTTACGGATACCAAACAATTGATTAGTGATACTCCAAATAATCAAGTTCCAATGAAC
CGTGCCAGCATGGCTTTTGATGCCAAATGTCTGACTGGATGCAGATTTGATGATGCCATTGTCCAGTTTGATATG
ACATATTGGCCTTTCACGGTGGTAAATGATGCTGGCAGGCCCAAAGGTCCAAGTAGAGTATGAGAGAAAAAAG
CTGCTACCCATAGGAGGTGTCTTCTATGGTTCTGACAAAGATGAAGGAAATTGCAAAAGTCTACCTTGGGAAGAC
TGTTACCAATGCTGTGGTCACAGTGCCAGCTTACTTGAATGA

2523/6881 FIGURE 2319A

GAGATCAACAACTTAAGAGAGAGGAGGTCATGAAGCAGTCGGAGGAGAACAACAACCTGCAGAGCCAGGTGCAGAAG CGCGGTGCTGCAGCAGCTGCCCCCCCCCCCCCAATAGAGGAAGAGTGCCCAGAAGACCTCCCAGAGAAGTTC GATGGCAACCCAGACATGCTGGCTCCTTTCATGGCCCAGTGCCAGATCTTCATGGAAAAGAGCACCAGGGATTTC TCAGTTGATCGTGTCCGTGTCTCGTGACAAGCATGATGACCGGCCGTGCTGCCCGTTGGGCCTCAGCAAAG CTGGAGCGCTCCCACTACCTGATGCACAACTACCCAGCTTTCATGATGGAAATGAAGCATGTCTTTGAAGACCCT CAGAGGCGAGAGGTTGCCAAACGCAAGATCAGACGCCTGCGCCAAGGCATGGGGTCTGTCATCGACTACTCCAAT GCTTTCCAGATGATTGCCCAGGACCTGGATTGGAACGAGCCTGCGCTGATTGACCAGTACCACGAGGGCCTCAGC GACCACATTCAGGAGGAGCTCTCCCACCTCGAGGTCGCCAAGTCGCTGTCTGCTCTGATTGGGCAGTGCATTCAC ATTGAGAGAAGGCTGGCCAGGGCTGCTGCAGCTCGCAAGCCACGCTCGCCACCCCGGGCGCTGGTGTTGCCTCAC ATTGCAAGCCACCACCAGGTAGATCCAACCGAGCCGGTGGGAGGTGCCCGCATGCGCCTGACGCAGGAAGAAAAA GAAAGACGCAGAAAGCTGAACCTGTGCCTCTACTGTGGAACAGGAGGTCACTACGCTGACAATTGTCCTGCCAAG TAAGGTCCCCACAAGATGATGCCTCATCTCCACACTTGCAAGTGATGCTCCAGATTCATCTTCCGGGCAGACACA CCCTGTTCGTCCGAGCCATGATCGATTCTGGTGCTTCTGGCAACTTCATTGATCACGAATATGTTGCTCAAAATG GAATTCCTCTAAGAATCAAGGACTGGCCAATACTTGTGGAAGCAATTGATGGGCCCCCATAGCATCGGGCCCAG TTGTCCACGAAACTCACGACCTGATAGTTGACCTGGGAGATCACCGAGAGGTGCTGTCATTTGATGTGACTCAGT CTCCATTCTTCCCTGTCGTCCTAGGGGTTCGCTGGCTGAGCACACATGATCCCAATATCACATGGAGCACTCGAT CTATCGTCTTTGATTCTGAATACTGCCGCTACCACTGCCGGATGTATTCTCCAATACCACCATCGCTCCCACCAC ${\tt AGAATGTGTACACTCCAGTAGATGAGCACGTCTACCCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCCCAGATCACCGCCTGGTTGACCCCTCACATAGAAATGATACCCCAGATCACCGCCTGGTTGACCCCTCACATAGAAATGATACCCAGATCACCGCCTGGTTGACCCCTCACATAGAAATGATACCCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCAGATCACCGCCTGGTTGACCCTCACATAGAAATGATACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACCAGATCACAGATCACCAGATCACCAGATCACACAGATCACAGATCACAGATCACACAGATCACAGATCACACAGATCACACAGATCACACAAGATCACACAGATCACACAGATCACACAGATCACACAGATCACACAGATCACACAGATCACACAATACACAAGATCACACAGATCACACAATACAATACAATCACAATACAAAATCACAAATACA$ CTGGAGCACACAGTATTCCCAGTGGACATGTGTATTCACTGTCCGAACCTGAAATGGCAGCTCTTCGAGATTTTG TGGCAAGAATGTAAAAGATGGGCTAATTACTCCAACGATTGCACCTAATGGAGCCCAAGTTCTCCAGGTGAAGA GGGGGTGGAAACTGCAAGTTTCTTATGATTGCCGAGCTCCAAACAATTTTACTATCCAGAATCAGTATCCTCGCC TATCTATTCCAAATTTAGAAGACCAAGCACACCTGGCAACGTACACTGAATTCGTACCTCAAATACCTGGATACC AAACATACCCCACATATGCCGCGTACCCGACCTACCCAGTAGGATTCGCCTGGTACCCAGTGGGACGAGACGGAC AAGGAAGATCACTATATGTACCTGTGATGATCACTTGGAATCCACACTGGTACCGCCAGCCTCCGGTACCACAGT ACCCGCCGCCACAGCCGCCTCCACCACCACCACCGCCGCCGCCTCCATCTTACAGTACCCTGTAAATACCTG TCATGTCCTTCAGGATCTCTGCCCTCAAAATTTATTCCTGTTCAGCTTCTCAATCAGTGACTGTGTGCTAAATTT TAGGCTACTGTATCTTCAGGCCACCTGAGGCACATCCTCTGAAACGGCTATGGAAGGTTAGGGCCACTCTGGA CTGGCACACATCCTAAAGCACCAAAAGACCTTCAACATTTTCTGAGAGCAACAGAGTATTTGCCAATAAATGATC TGGGTTTTACCTGCCAAAACCTCCATCACCATCTAAATTATAGGCTGCCAAATTTGCTGTTTAACATTTACAGAG AAGCTGATACAAACGCAGGAAATGCTGATTTCTTTATGGAGGGGGAGACGAGGAGGAGGAGGACATGACTTTTCT TGCGGTTTCGGTACCCTCTTTTTAAATCACTGGAGGACTGAGGCCTTATTAAGGAAGCCAAAATTATCGGTGCAG TGTGGAAAGGCTTCCGTGATCCTCTCGCTGCACCCTTAGAAACTTCACCGTCTTCAAACTCCATTTCCATGGTTC TGTTAATTCTCAAGGAGCAGCAACTCGACTGGTTCTCCCAGGAGCAGGAAAAACCCTTGTGACATGAAACATCTC AGGCCTGAAAAGAAAGTGCTCTCCAGATGGACTCTTGCATGTTAAGACTATGTCTTCACATCATGGTGCAAATC ACATGTACCCAATGACTCCGGCTTTGACACACACCTTACCATCATCATGCCATGATGGCTTCCACAAAGCATTA AACCTGGTAACCAGAGATTACTGGTGGCTCCAGCGTTGTTAGATGTTCATGAAATGTGACCACCTCTCAATCACC TTTGAGGGCTAAAGAGTAGCACATCAAAAGGACTCCAAAATCCCATACCCAACTCTTAAGAGATTTGTCCTGGTA CTTCAGAAAGAATTTTCATGAGTGTTCTTAATTGGCTGGAAAAGCACCAGCTGACGTTTTGGAAGAATCTATCCA TGTGTCTGCCTCCATATGCATCTGGGCATTTCATCTTCAGTCCCCTCATTAGACTGTAGCATTAGGATGTGTGGA GAGAGGAGAAATGATTTAGCACCCAGATTCACACTCCTATGCCTGGAAGGGGGACATCTTTGAAGAAGAGGAATT AGGGCTGTGGACACTGTCTTGAGGATGTGGACTTCCTTAGTGAGCTCCACATTACTTGATGGTAACCACTTCAAA AGGATCAGAATCCACGTAATGAAAAAGGTCCCTCTAGAGGATGGAGCTGATGTGAAGCTGCCAATGGATGAAAAG

2524/6881 FIGURE 2319B

CCTCAGAAAGCAACTCAAAGGACTCAAAGCAACGGACAACACAAGAGTTGTCTTCAGCCCAGTGACACCTCTGAT GTCCCCTGGAAGCTTTGTGCTAACCTGGGACTGCCTGACTTCCTTTAGCCTGGTCCCTTGCTACTACCTTGAACT GTTTTATCTAACCTCTCTTTTTCTGTTTAATTCTTTGCTACTGCCATTGACCCTGCTGCAGGATTTGTGTCATTT CAGTTTGAGCAGTAGAAAACAACATGGTGTATATCTCAAATTGCCTGACATGAAGAGGAGTCTAACGGTGAAGTT TCACTTTTCATCAGCATCATCTTTCACATGTTCATTATCATCCGCTCTTATTCTTGCATGTTTAAACACTTAAAA TTTTTAGTATAATTTTTAGTGTGTTTTTGAAGTGGTGACTAGGCTTTCAAAAACTTCCATTGAATTACAAAGCACT ATCCAGTTCTTATTGTTAAACTAAGTAAAAATGATAAGTAACATAGTGTAAAAATATTCCTTTACTGTGAACTTCT TACAATGCTGTGAATGAGAGGCTCCTCAGAACTGGAGCATTTGTATAATAATTCATCCTGTTCATCTTCAATTTT AACATCATATATAATTTCAATTCTATCAATTGGGCCTTTAAAAATCATATAAAAGGATATAAAATTTGAAAAGGG ATGTGTTTTAGAGTAATTACTTTTAAAATGGTGCATTTGTGCTTCTGAACTATTTTGAAGAGTCACTTCTGTTTA CCTCAAGTATCAATTCATCCTCCATACATTTGAATTCAAGTTGTTTTTTTGTCAAATTTACAGTTGTCAATTGATC TTCAAGCTGCAGGGTGCCTAGAAATGGGCCGTTGTCTGTAGCCCTGGCATGTGCACACGGACATTTGCCACCACT GCAAGCAAAAGTCTGGAGAAGTTCACCAACGACAAGAACGATTAGGGAAAATATGCTGCTGTGGGTTAACAACTC AGAAAGTCCCTGATCCACATTTGGCTGTTTACTAAAGCTTGTGATTAACTTTTTGGCAGTGTGTACTATGCTCTA TTGCTATATATGCTATCTATAAATGTAGATGTTAAGGATAAGTAATTCTAAATTTATTATTCTATAGTTTTGAAG TTTGGTTAAGTTTCCTTTCACTCAATTGATTTATTTTGTTGTTAATCAAATTTATGTTAATTGGATCCTTTAAAT TTTTTTTGGCATTTTCCAACAAAATGGCTTTATTCATAAGAAAGGAAAAAAATCAATGGAATTTGATATCTAAA TAAGAGCTCCCATTGATAGGCAAGCCTAGAGAGAACTAGCTAAATTTATCATGCTAGGATATTGAAACACAGAAA GTTTACATACATTTATGAAGGGTCAATTTAGTTTGGACAGTGAGGTATTTGTCTTAGTGGAAAAAAGGAGAATTA GTCTGATCAAATCGTGAAGTAATACAGTGAACTTGCAGGTGCACAAAATAAGAGGGCCACATCTATATGGTGCAG TCTGGAATTCTGTTTAAGTTTGTAGGTACCTCTTGGACTTCTGAATTGATCCAGTTGTCATCCACCACAGACATC TCACATCAGATACAGACAGTTCCAAGATTGACAACAGAGAACAACCTGCTGGAAAGACCTGGGCAGAAATGGAGA GCCCTGCGGGAACCATGCTACATTTTCATCTAAAGAGAGAATGCACATCTGATGAGACTGAAAGTTCTTTGTTGT TTTAGATTGTAGAATGGTATTGAATTGGTCTGTGGAAAATTGCATTGCTTTTATTTCTTTGTGTAATCAAGTTTA CCTATAATTGCTATCCTTAAAGATTTCAAATAAACTCGGAGGGAACTGCAGGGAGACCAACTTATTTAGAGCGAA TTGGACATGGATAAAAACCCCAGTGGGAGAAAGTTCAAAGGTGATTAGATTAATAATTTAATAGAGGATGAGTGA CCTCTGATAAATTACTGCTAGAATGAACTTGTCAATGATGGTGGTAAATTTTCATGGAAGTTATAAAAGTGATA AATAAAAACCCTTGCTTTTACCCCTGTCAGTAGCCCTCCTCCTACCACTGAACCCCATTGCCCCTACCCCTCCTT CTAACTTTATTGCTGTATTCTCTTCACTCTATATTTCTCTCTATTTTGCTAATATTGCATTGCTGTTACAATAAAA ATTCAATAAAGATTTAGTGGTTAAGTGC

MTERRRDELSEEINNLREKVMKQSEENNNLQSQVQKLTEENTTLREQVEPTPEDEDDDIELRGAAAAAAPPPPIE EECPEDLPEKFDGNPDMLAPFMAQCQIFMEKSTRDFSVDRVRVCFVTSMMTGRAARWASAKLERSHYLMHNYPAF MMEMKHVFEDPQRREVAKRKIRRLRQGMGSVIDYSNAFQMIAQDLDWNEPALIDQYHEGLSDHIQEELSHLEVAK SLSALIGQCIHIERRLARAAAARKPRSPPRALVLPHIASHHQVDPTEPVGGARMRLTQEEKERRRKLNLCLYCGT GGHYADNCPAKASKSSPAGNSPAPL

2526/6881 FIGURE 2321A

AGCACCACGGCAGCAGGAGGTTTCGGCTAAGTTGGAGGTACTGGCCACGACTGCATGCCCGCCGCCCAGGTGA TACCTCCGCCGGTGACCCAGGGGCTCTGCGACACAAGGAGTCTGCATGTCTAAGTGCTAGACATGCTCAGCTTTG TGGATACGCGGACTTTGTTGCTGCTTGCAGTAACCTTATGCCTAGCAACATGCCAATCTTTACAAGAGGAAACTG TAAGAAAGGGCCCAGCCGGAGATAGAGGACCACGTGGAGAAAGGGGTCCACCAGGCCCCCCAGGCAGAGATGGTG AAGATGGTCCCACAGGCCCTCCTGGTCCACCTGGTCCTCCTGGCCCCCCTGGTCTCGGTGGGAACTTTGCTGCTC AGTATGATGGAAAAGGAGTTGGACTTGGCCCTGGACCAATGGGCTTAATGGGACCTAGAGGCCCACCTGGTGCAG CTGGAGCCCCAGGCCCTCAAGGTTTCCAAGGACCTGCTGGTGAGCCTGGTGAACCTGGTCAAACTGGTCCTGCAG GTGCTCGTGGTCCAGCTGGCCCTCCTGGCAAGGCTGGTGAAGATGGTCACCCTGGAAAACCCGGACGACCTGGTG AGAGAGGAGTTGTTGGACCACAGGGTGCTCGTGGTTTCCCTGGAACTCCTGGACTTCCTGGCTTCAAAGGCATTA GGGGACACAATGGTCTGGATGGATTGAAGGGACAGCCCGGTGCTCCTGGTGTGAAGGGTGAACCTGGTGCCCCTG GTGAAAATGGAACTCCAGGTCAAACAGGAGCCCGTGGGCTTCCTGGTGAGAGAGGACGTGTTGGTGCCCCTGGCC CAGCTGGTGCCCGTGGCAGTGATGGAAGTGTGGGTCCCGTGGGTCCTGCTGGTCCCATTGGGTCTGCTGGCCCTC CAGGCTTCCCAGGTGCCCCTGGCCCCAAGGGTGAAATTGGAGCTATTGGTAACGCTGGTCCTGGTCCCGCCG GTCCCCGTGGTGAAGTGGGTCTTCCAGGCCTCTCCGGCCCCGTTGGACCTCCTGGTAATCCTGGAGCAAACGGCC TTACTGGTGCCAAGGGTGCTGCCTGGCCTTCCCGGCGTTGCTGGGGCTCCCGGCCTCCCTGGACCCCGCGGTATTC GAGAGAGCGGTAACAAGGGTGAGCCCGGCTCTGCTGGGCCCCAAGGTCCTCCTGGTCCCAGTGGTGAAGAAGGAA AGAGAGGCCCTAATGGGGAAGCTGGATCTGCCGGCCCTCCAGGACCTCCTGGGCTGAGAGGTAGTCCTGGTTCTC GTGGTCTTCCTGGAGCTGATGGCAGAGCTGGCGTCATGGGCCCTCCTGGTAGTCGTGGTGCAAGTGGCCCTGCTG GAGTCCGAGGACCTAATGGAGATGCTGGTCGCCCTGGGGAGCCTGGTCTCATGGGACCCAGAGGTCTTCCTGGTT CCCCTGGAAATATCGGCCCCGCTGGAAAAGAAGGTCCTGTCGGCCTCCCTGGCATCGACGGCAGGCCTGGCCCAA TTGGCCCCGTTGGAGCAAGAGGAGAGCCTGGCAACATTGGATTCCCTGGACCCAAAGGCCCCACTGGTGACCCTG GCAAAAACGGTGATAAAGGTCATGCTGGTCTTGCTGGTGCTCGGGGTGCTCCAGGTCCTGATGGAAACAATGGTG CTCAGGGACCTCCTGGACCACAGGGTGTTCAAGGTGGAAAAGGTGAACAGGGTCCCGCTGGTCCTCCAGGCTTCC AGGGTCTGCCTGGCCCCTCAGGTCCCGCTGGTGAAGTTGGCAAACCAGGAGAAAGGGGTCTCCATGGTGAGTTTG GTCTCCCTGGTCCTGGTCCAAGAGGGGAACGCGGTCCCCCAGGTGAGAGTGGTGCTGCCGGTCCTACTGGTC CTATTGGAAGCCGAGGTCCTTCTGGACCCCCAGGGCCTGATGGAAACAAGGGTGAACCTGGTGTGGTGGTGCTG TGGGCACTGCTGGTCCATCTGGTCCTAGTGGACTCCCAGGAGAGGGGGTGCTGCTGGCATACCTGGAGGCAAGG GAGAAAAGGGTGAACCTGGTCTCAGAGGTGAAATTGGTAACCCTGGCAGAGATGGTGCTCGTGGTGCTCATGGTG CTGTAGGTGCCCCTGGTCCTGGAGCCACAGGTGACCGGGGCGAAGCTGGGGCTGCTGGTCCTG GTGCTGCTGGTCAACCGGGTGCTAAAGGAGAAAGGGGCCAAAGGGCCTAAGGGTGAAAACGGTGTTGTTGGTC CCACAGGCCCCGTTGGAGCTGCTGGCCCAGCTGGTCCAAATGGTCCCCCCGGTCCTGCTGGAAGTCGTGATG GCCCTCCTGGTCCCCCTGGTCCTGCTGGGAAAGAAGGGCTTCGTGGTCCTCGTGGTGACCAAGGTCCAGTTGGCC GAACTGGAGAAGTAGGTGCAGTTGGTCCCCCTGGCTTCGCTGGTGAGAAGGGTCCCTCTGGAGAGGCTGGTACTG GTGAACGTGGTCTACCTGGTGTTGCTGGTGCTGTGGGTGAACCTGGTCCTCTTGGCATTGCCGGCCCTCCTGGGG CCCGTGGTCCTCCTGGTGCTGTGGGTAGTCCTGGAGTCAACGGTGCTCCTGGTGAAGCTGGTCGTGATGGCAACC CTGGGAACGATGGTCCCCCAGGTCGCGATGGTCAACCCGGACACAAGGGAGAGCGCGGTTACCCTGGCAATATTG GTCCCGTTGGTGCTGCAGGTGCACCTGGTCCTCATGGCCCCGTGGGTCCTGCTGGCAAACATGGAAACCGTGGTG AAACTGGTCCTTCTGGTCCTGTTGGTCCTGCTGGTGCTGTTGGCCCAAGAGGTCCTAGTGGCCCACAAGGCATTC GTGGCGATAAGGGAGAGCCCGGTGAAAAGGGGCCCAGAGGTCTTCCTGGCTTCAAGGGACACAATGGATTGCAAG GTCTGCCTGGTATCGCTGGTCACCATGGTGATCAAGGTGCTCCTGGCTCCGTGGGTCCTGGTCCTAGGGGCC CTGCTGGTCCTTCTGGCCCTGCTGGAAAAGATGGTCGCACTGGACATCCTGGTACGGTTGGACCTGCTGGCATTC GAGGCCCTCAGGGTCACCAAGGCCCTGCTGGCCCCCTGGTCCCCTGGCCCTCCTGGACCTCCAGGTGTAAGCG GTGGTGGTTATGACTTTGGTTACGATGGAGACTTCTACAGGGCTGACCAGCCTCGCTCAGCACCTTCTCTCAGAC CCAAGGACTATGAAGTTGATGCTACTCTGAAGTCTCTCAACAACCAGATTGAGACCCTTCTTACTCCTGAAGGCT WO 2004/030615 PCT/US2003/028547

2527/6881 FIGURE 2321B

CTAGAAAGAACCCAGCTCGCACATGCCGTGACTTGAGACTCAGCCACCCAGAGTGGAGCAGTGGTTACTACTGGA TTGACCCCAACCAAGGATGCACTATGGAAGCCATCAAAGTATACTGTGATTTCCCTACCGGCGAAACCTGTATCC GGGCCCAACCTGAAAACATCCCAGCCAAGAACTGGTATAGGAGCTCCAAGGACAAGAAACACGTCTGGCTAGGAG AAACTATCAATGCTGGCAGCCAGTTTGAATATATGTTGAAGGAGTGACTTCCAAGGAAATGGCTACCCAACTTG CCTTCATGCGCCTGCTGGCCAACTATGCCTCTCAGAACATCACCTACCACTGCAAGAACAGCATTGCATACATGG ATGAGGAGACTGGCAACCTGAAAAAGGCTGTCATTCTACAGGGCTCTAATGATGTTGAACTTGTTGCTGAGGGCA AATACAAAACAAATAAGCCATCACGCCTGCCCTTCCTTGATATTGCACCTTTGGACATCGGTGGTGCTGACCATG AAAAACTTTCTCTTTGCCATTTCTTCTTCTTTTTTAACTGAAAGCTGAATCCTTCCATTTCTTCTGCACATC TACTTGCTTAAATTGTGGGCAAAAGAAGAAGAAGAAGATTGATCAGAGCATTGTGCAATACAGTTTCATTAACTC CTTCCCCCGCTCCCCCAAAAATTTGAATTTTTTTTTCAACACTCTTACACCTGTTATGGAAAATGTCAACCTTTG TAAGAAAACCAAAATAAAAATGAAAAATAAAAAACCATAAACATTTGCACCACTTGTGGCTTTTGAATATCTTCC ACAGAGGGAAGTTTAAAACCCAAACTTCCAAAGGTTTAAACTACCTCAAAACACTTTCCCATGAGTGTGATCCAC ATTGTTAGGTGCTGACCTAGACAGAGATGAACTGAGGTCCTTGTTTTGTTTTGTTCATAATACAAAGGTGCTAAT TAATAGTATTTCAGATACTTGAAGAATGTTGATGGTGCTAGAAGAATTTGAGAAGAAATACTCCTGTATTGAGTT GTATCGTGTGTGTATTTTTAAAAAATTTGATTTAGCATTCATATTTTCCATCTTATTCCCAATTAAAAGTATG CAGATTATTTGCCCAAAGTTGTCCTCTTCTTCAGATTCAGCATTTGTTCTTTGCCAGTCTCATTTTCATCTTCTT CCATGGTTCCACAGAAGCTTTGTTTCTTGGGCAAGCAGAAAAATTAAATTGTACCTATTTTGTATATGTGAGATG TTTAAATAAATTGTGAAAAAAATGAAATAAAGCATGTTTGGTTTTCCAAAAGAACATAT

WO 2004/030615 PCT/US2003/028547

2529/6881 FIGURE 2323

CATCCGTGGACTTGGAGGCTGGCTCGGGCCCGCACCTCCCATCCCCAGCTGCCCGCAACCCCCAGTGACTCGGGA CACGTGACCCTCCCCCAGGAATGTGGTGACGTCATCGGAGGCGTGGTCGTCCCCAAAATTAGGGAGGAAGAGGAA AAAAAAAGCCAGAAAAAGTTTTCTTTTCTGGAGTCCCAAACGAGGTGCGGGACGGAAGAGGGGGTGAAGGCCAG AGGCTCGGGGCTTCAAGACCGCTGTCTGGAGTCCCCCTTTCCAGGCCATGTCGGGGCCCACCTGGCTGCCCCCGA AGCAGCCGGAGCCCGCAGAGCCCCTCAGGGGAGGGCGATCCCCCGGGGCACCCCGGGGCCACCACCGGCCCACG GAGCAGCACTCCAGCCCCACCCCAGGGTCAATTTTTGCCCCCTTCCATCTGAGCAGTGTTACCAGGCCCCAGGGG GGGGGGGCCTTCGCCCTGGAAGCCTGGACGCCGAGATAGACTTGCTGAGCAGCACGCTGGCCGAGCTGAATGGGG GTCGGGGTCATGCGTCACGGCGACCAGACCGACAGGCATATGAGCCCCCGCCACCTCCTGCCTACCGCACGGGCT CCCTGAAGCCAAATCCAGCCTCGCCGCTCCCAGCGTCTCCCTATGGGGGCCCCACTCCAGCCTCTTACACTACCG GGCGGGGAGCCTCTCAGGCCTCTGGGCCCCTCCCGGGCCCCACTTTCCTCTCCCAGGCCGAGGTGAAGTCTGGG GGCCTGGCTATAGGAGCCAGAGAGAGCCAGGGCCAGAGGGCCAAAGAGAGGAAGCTGCTGGGGTCTCTGGCCCTGCAG CGAAGAAGCTGGTTCACGACATGAACCACCCGCCCAGCGGGGAGTACTTTGGCCAGTGTGGTGGCTGCGGAGAAG ATGTGGTTGGGGATGGGGCTGGGGTTGTGGCCCTTGATCGCGTCTTTCACGTGGGCTGCTTTGTATGTTCTACAT GCCGGGCCCAGCTTCGCGGCCAGCATTTCTACGCCGTGGAGAGGAGGGCATATTGCGAGGGCTGCTACGTGGCCA CCCTGGAGAAATGTGCCACGTGCTCCCAGCCCATCCTGGACCGGATCCTGCGGGCTATGGGGAAGGCCTACCACC CTGGCTGCTTCACCTGCGTGGTGTCTCACCGCGGCCTCGACGGCATCCCCTTCACAGTGGATGCTACGAGCCAGA TCCACTGCATTGAGGACTTTCACAGGAAGTTTGCCCCAAGATGCTCAGTGTGCGGTGGGGCCATAATGCCTGAGC CAGGTCAGGAGGAGACTGTGAGAATTGTTGCTCTGGATCGAAGTTTTCACATTGGCTGTTACAAGTGCGAGGAGT GTGGGCTGCTCCCCCTCTGAGGGCGAGTGTCAGGGCTGCTACCCGCTGGATGGGCACATCTTGTGCAAGGCCT GGTTCTCAGTTCCAGTTCCCATCCTTTGATTGATCACTCTCCCTGACATCCACCTGTATGACTTTGTCACCAAAT GCTGTCTTCTCTCTCCAATCAAGAAATAATAATCCCTCGAGTTTACAAAACACTTCCAAGTCTGTTGTCTCAT CTGATTCTCCCAGTAGCCCATTACAGGCCCAGTCATTGTT

MSGPTWLPPKQPEPARAPQGRAIPRGTPGPPPAHGAALQPHPRVNFCPLPSEQCYQAPGGPEDRGPAWVGSHGVL QHTQGLPADRGGLRPGSLDAEIDLLSSTLAELNGGRGHASRRPDRQAYEPPPPPAYRTGSLKPNPASPLPASPYG GPTPASYTTASTPAGPAFPVQVKVAQPVRGCGPPRRGASQASGPLPGPHFPLPGRGEVWGPGYRSQREPGPGAKE EAAGVSGPAGRGGEHGPQVPLSQPPEDELDRLTKKLVHDMNHPPSGEYFGQCGGCGEDVVGDGAGVVALDRVF HVGCFVCSTCRAQLRGQHFYAVERRAYCEGCYVATLEKCATCSQPILDRILRAMGKAYHPGCFTCVVCHRGLDGI PFTVDATSQIHCIEDFHRKFAPRCSVCGGAIMPEPGQEETVRIVALDRSFHIGCYKCEECGLLLSSEGECQGCYP LDGHILCKACSAWRIQELSATVTTDC

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2531/6881 FIGURE 2325

GTCTTTTCCGGCCCCGTGCACTCTCCGCCCGAGCGGAGCCCCCCGGCTCGCGGGGATCGCCCCCGAGCGCTGCG TCCTGCGGGTCACCTAACCCATTTGTGGCTTCCTCTACCTGTGCTCAGCCATGGCCAGCGAGAGCTCACCTCTGC CCCGGAAGCTGTCCACCTTCCTGGGTGTGGTGCCCCACTGTCCTGTCCATGTTCAGCATAGTTGTTTTCTGA GGATTGGGTTCGTGGGGCTATGCTGGGCTACTGCAGGCCCTGGCCATGCTGCTGGTTGCCTACTTCATCCTGG GCCGCACACTGGGGCCCGAGGTCGGGGGCAGCATTGGGCTCATGTTCTACCTGGCTAACGTCTGTGGCTGTGCCG TCTCCCTCCTGGGGCTGGTGGAGTCTGTGCTTGATGTCTTCGGGGCCCGATGCCACAGGGCCCAGTGGGCTCCGGG TGGGAGCCGGCCTCTATGCCCGGGCCTCATTCCTCACATTCCTGCTGGTCTCTGGCTCCCTGGCCTCTGTGCTCA TCAGTTTTGTGGCTGTGGGGCCGAGGGACATCCGCTTGACTCCTAGGCCTGGCCCCAATGGCTCCTCCCTGCCGC CCCGGTTTGGCCACTTCACCGGCTTCAACAGCAGTACCCTGAAGGACAACTTGGGCGCTGGCTATGCTGAGGACT ACACCACGGGAGCCGTGATGAATTTTGCCAGCGTCTTTGCTGTCCTCTTTAACGGCTGTACAGGCATCATGGCTG GGGCCAACATGTCAGGGGAGCTGAAGGACCCCAGCCGGGCGATCCCTCTGGGCACGATCGTCGCCGTCGCCTACA CCTTCTTCGTCTATGTCCTGCTTTTCTTTCTCTCCAGCTTCACTTGTGACAGGACCCTGCTGCAGGAAGACTATG GGTTCTTCCGCGCCATCAGCCTGTGGCCCCCACTGGTGTTGATCGGAATCTATGCCACAGCGCTCTCAGCGTCCA TGAGCTCGCTCATTGGTGCCTCCCGCATCCTCCATGCCCTGGCCCGGGATGACCTCTTTGGCGTGATCTTGGCAC TGTCCTGCCTGAGCCTGGAGTGGGCCTCGGCCCCCAACTTCCGCCCCACCTTCAGCCTGTTCTCCTGGCACACCT GCCTGCTGGGGGTGGCCTCCTGCTCATGATGTTCCTCATCAGTCCTGGCGCGGGTGGCTCCCTGCTCC TCATGGGTCTGCTGCCTGCTCACCGCGCGAGGAGGCCCCAGTAGCTGGGGCTATGTCAGCCAGGCCTTGC TTTTCCACCAGGTGCGTAAGTATCTGCTTCGGCTGGACGTCCGGAAGGATCACGTGAAGTTCTGGCGGCCCCAGC TGCTGCTCCTGGTGGGGAACCCCCGGGGCGCCCTGCCTCTGCTGCGGTTGGCCAACCAGCTTAAGAAGGGGGGGC TGTATGTGCTGGGCCACGTCACCCTGGGAGACCTCGACTCCCTGCCCTCGGACCCTGTACAGCCGCAGTATGGGG CATGGCTCAGCCTGGTGGACCGTGCCCAGGTGAAGGCTTTTGTGGATCTAACCCTCTCACCCTCCGTGCGCCAGG GGGCTCAGCATCTGCTGCGAATCTCCGGCCTCGGTGGCATGAAGCCCAACACGTTGGTCCTAGGTTTCTACGATG CCCCAGCTCTGAGCACCCTGTTCCCTCCCCGGGCTCCTGGGAGCCCCCGGGCCCTCAATCCCCAGGACTATG TGGCCACGGTGGCCGACGCCCTCAAGATGAACAAGAATGTGGTGCTGGCCCGGGCCAGCGGGGCCTTGCCCCCTG AGCGGCTGAGCCGGGGGTCTGGGGGCACCTCTCAGCTGCACCATGTGGACGTGTGGCCCCTCAACCTGCTGCGGC CCCGGGGTGGGCCCGGCTATGTGGATGTCTGCGGCCTCTTCCTGCTGCAGATGGCAACCATCTTGGGCATGGTGC CTGGGGAACCCGAGGCGGAGGAGGGAAGGGGACTTTGTGAACAGTGGGCGGGAGACGCAGAGGCCAGAGGCCCTGG CACGCAGCGCCAACGCCCTGGTTCGGGCCCAGCAGGGGCGCGCACAGGAGGAGGGCCGGGTGGGCCGGAGGGTG CCCGCTACCTGGCGCTACTGGAGACTCTAACCCGAGACCTGGGCCCCACGCTGCTGGTTCATGGGGTCACTCCAG CCTTGGAGGAGGAGGAGGAGGCCACTGTGGCCCGTGGCCCTTGGGACGTGGAGCCCAGGGGAGGTTT GAAGGGGATCCTGGGCTTGGGCATCACGCCCACCTCCTTTGGCAGAGGGACCCCAGCACACTAACTCTGGGTGGC TGTCCCCACCGTGCAGGGGAGGGAGTCCGCAGCCTCCCTTCACTGGTGCCTTGATGCTAGGGGCCAGGCCTCCTC TGTGACTCTGGGCTACCTCAGTTTCCCCATTTTGGCCAGACTCACCGGCCCACTGGGGTGGTGATGTTTTCGTTC TGTTTTATTTTCTAACTCTGCTGACCATGAATAAAAGACCAAAACAC

WO 2004/030615 PCT/US2003/028547

2533/6881 FIGURE 2327

 ${\tt MAENREPRGAVEAELDPVEYTLRKRLPSRLPRRPNDIYVNMKTDFKAQLARCQKLLDGGARGQNACSEIYIHGLGLAINHAINIALQLQAGSFGSLQVAANTSTVELVDELEPETDTREPLTRIRNNSAIHIRVFRVTPK}$

GGAGGAAGACAGCGCCGCCGCGCCACCGCCAGCGACCTCCGCCGCAGAGTCCCACCGCCACAGGCCTCGGGCCAG CGGCCAGGAGCTGCCTCCCCAGCCCCGTCCCGCGGCCCCCAGCCGCCCCAACCCTGCCCCACGGGCCCGGGC CCATGAGTGAGCTGGAGCAACTGAGACAGGAGGCCGAGCAGCTCCGGAACCAGATCCGGGATGCCCGAAAAGCAT CCCTCCGTGGGCACCTGGCAAGATCTATGCCATGCACTGGGGGACCGACTCAAGGCTGCTGGTCAGCGCCTCCC AGGATGGGAAGCTCATCTCGGGACAGCTACACCACCAACAAGGTCCACGCCATCCCGCTGCGCTCCTCCTGGG TAATGACCTGTGCCTACGCGCCCTCAGGGAACTTTGTGGCCTGTGGGGGGGTTGGACAACATCTGCTCCATCTACA GCCTCAAGACCCGCGAGGGCAACGTCAGGGTCAGCCGGGAGCTGCCTGGCCACACTGGGTACCTGTCGTGTTGCC GCTTCCTGGATGACAACCAAATCATCACCAGCTCTGGGGATACCACCTGTGCCCTGTGGGACATTGAGACAGGCC AGCAGACAGTGGGTTTTGCTGGACACAGTGGGGATGTGATGTCCCTGTCCCTGGCCCCGATGGCCGCACGTTTG TGTCAGGCGCCTGTGATGCCTCTATCAAGCTGTGGGACGTGCGGGATTCCATGTGCCGACAGACCTTCATCGGCC ATGAATCCGACATCAATGCAGTGGCTTTCTTCCCCAACGGCTACGCCTTCACCACCGGCTCTGACGACGCCACGT GCCGCCTCTTCGACCTGCGGGCCGATCAGGAGCTCCTCATGTACTCCCATGACAACATCATCTGTGGCATCACCT CTGTTGCCTTCTCGCGCAGCGGACGGCTGCTCGCTGGCTACGACGACTTCAACTGCAACATCTGGGATGCCA TGAAGGGCGACCGTGCAGGAGTCCTCGCTGGCCACGACAACCGCGTGAGCTGCCTCGGGGTCACCGACGATGGCA TGGCTGTGGCCACGGGCTCCTGGGACTCCTTCCTCAAGATCTGGAACTAATGGCCCCACCCCCACTGGGCCCAGG CCAGGAGGGCCCTGCCCATGCCCACACTACAGGCCAGGGCTGCGGGGCTGGCGCAATCCCAGCCCCCTTCCCCG GGCCACGGGGCCTTGGGTCCCTGCCCTCCCACCCAGGTTTGGTTCCTCCCGGGGCCCCCACTGTGGAGATAAGAA ${\tt GGGGATGGAATGGGGGAAGAGGAGGAGGAGGCCCTCATCCTTCTGCTGCCCTGGGGTTGGGGCCTCACCCCTT}$ $\tt CTGGAGGCCGGAGGCAGGTGGAAACCCCAGGGGCTGGCTTTTTAAAACTGGTTTTATTTTATTTTATT$ ATATTTTCAGTTTTTCCATAAAGGAGCCAATTCCAACTCTGT

ATCCTGCTGCTGCCGCCACCGCTGCTGCTCTGCAAAATTCAGCTGCTGCTCTGTCTTGAGGACCCCAGCGC CCTTTTGCCCAGGGCCAGACCCCCAACTACACCAGACCCGTGTTCCTGTGCGGAGGGGATGTGAAGGGGGAATCA GGTTACGTGGCAAGTGAGGGGTTCCCCAACCTCTACCCCCCTAATAAGGAGTGCATCTGGACCATAACGGTCCCC GAGGGCCAGACTGTGTCCCTCTCATTCCGAGTCTTCGACCTGGAGCTGCACCCCGCCTGCCGCTACGATGCTCTG GAGGTCTTCGCTGGGTCTGGGACTTCCGGCCAGCGGCTCGGACGCTTTTGTGGGACCTTCCGGCCTGCGCCCCTA GTCGCCCCGGCAACCAGGTGACCCTGAGGATGACGACGGATGAGGGCACAGGAGGACGAGGCTTCCTGCTCTGG TACAGCGGGCGGCCACCTCGGGCACTGAGCACCAATTTTGCGGGGGGGCGGCTGGAGAAGGCCCAGGGAACCCTG ACCACGCCCAACTGGCCCGAGTCCGATTACCCCCCGGGCATCAGCTGTTCCTGGCACATCATCGCGCCCCCGGAC CAGGTCATCGCGCTGACCTTCGAGAAGTTTGACCTGGAGCCGGACACCTACTGCCGCTATGACTCGGTCAGCGTG TTCAACGGAGCCGTGAGCGACGACTCCCGGAGGCTGGGGAAGTTCTGCGGCGACGCAGTCCCGGGCTCCATCTCC TCCGAAGGGAATGAACTCCTCGTCCAGTTCGTCTCAGATCTCAGTGTCACCGCTGATGGCTTCTCAGCCTCCTAC AAGACCCTGCCGCGGGCACTGCCAAAGAAGGGCCAAGGGCCCCGGCCCCAAACGGGGAACTGAGCCTAAAGTCAAG CAGTGCCGCCGGACAGCCCTTGCAGAGCAACTTCTGTGCCAGCAGCCTTGTGGTGACTGCGACAGTGAAGTCC CTGCCTTCTCCACCCACTGGTGCCTCCCTGAAGTTTTACGTGCCTTGCAAGCAGTGCCCCCCCATGAAGAAAGGA CACCGGCCCAACCAGGACCAGATCCTCACCAACCTAAGCAAGAGGAAGTGCCCCTCTCAACCTGTGCGGGCTGCT **CTTAATGA**

MLPAATASLLGPLLTACALLPFAQGQTPNYTRPVFLCGGDVKGESGYVASEGFPNLYPPNKECIWTITVPEGQTV SLSFRVFDLELHPACRYDALEVFAGSGTSGQRLGRFCGTFRPAPLVAPGNQVTLRMTTDEGTGGRGFLLWYSGRA TSGTEHQFCGGRLEKAQGTLTTPNWPESDYPPGISCSWHIIAPPDQVIALTFEKFDLEPDTYCRYDSVSVFNGAV SDDSRRLGKFCGDAVPGSISSEGNELLVQFVSDLSVTADGFSASYKTLPRGTAKEGQGPGPKRGTEPKVKLPPKS QPPEKTEESPSAPDAPTCPKQCRRTGTLQSNFCASSLVVTATVKSMVREPGEGLAVTVSLIGAYKTGGLDLPSPP TGASLKFYVPCKQCPPMKKGVSYLLMGQVEENRGPVLPPESFVVLHRPNQDQILTNLSKRKCPSQPVRAAASQD

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2537/6881 FIGURE 2331

CACCCACTCGCTGGCTGCCACCGGGAGCAGAGGGGGGGCTCGGCCCCCTCCCACATCAGTCTCCAGACCCTTG GGGCTTCAGAGGCCGCTCCTAGGCTCCTCGGAGGAGGCGGGGTTTCTTCTTTTCCGGAGAGCAAACTTTCCTCG GAGATGCCTGGCAGGATGAGCCGCGCCCCCGGAGAGGACGGCACAGCCTCTGATCGCCGCCTGCGTGCCCCGCC ACTGCCCATGGCCAGGAGGCCCCAGGGAACGGACAGCCCGACCTCTTAGGCGCCCGGGACCCTCAGGCTCAGATCA GTGGCCGAGGCCCCAGAGTTTGCAAACTCAGCTCTGGAGTTCAGCAGCAACAGCAGCAGGAAAAACCTGCCCCTG CTCCCCCTCCCGCCACCTCCCCTCTCTCTCTCCCCTCACCCAGCAGGCACCCCCGGTTCCCGCCAGGCCCTC $\verb|CTGCCATGTCGGACCCAGACGTCCCCAGGGGCTCGGATGTCCCCGCCATGTGGCCCCCTTGTTCCAGGGGTGCCT|\\$ GAGCCCCTTCAAGGAGCCCCAACCCACCCCCAACCTTGGCCCAGCCCTGAGCCCCAGGGACCATGAGCGGGGGCA AGAAGAAGAGTAGTTTCCAAATCACCAGCGTCACCACGGACTATGAGGGCCCTGGGAGCCCAGGGGCTTCGGATC CCCCTACCCCACAGCCCCAACCGGGCCCCGCCCCGCCTGCCCAATGGGGAGCCCAGCCCCGATCCGGGGGGCCA AGGGCACCCCCGGAATGGCTCCCCACCACCTGGGGCCCCTTCCTCCCGTTTCCGGGTGGTGAAGCTGCCCCACG GCCTGGGAGAGCCTTATCGCCGCGGTCGCTGGACGTGTGTGGATGTTTATGAGCGAGACCTGGAGCCCCACAGCT $\tt CCCCCACCTCTCCTGGACCTCAGGCCCGCTCCTTCACTGGGGGGACTGGGCCAGCTGGTGCCCAGCAAAGCCA$ AGGCAGAGAAACCCCCACTGTCGGCCTCCTCACCCCAGCGCGCCCCCAGAGCCTGAGACCGGTGAGAGTGCGG GCACATCCCGGGCTGCCACGCCCTGCCCTCTCTGAGGGTGGAAGCGGAGGCTGGGGGGCTCAGGGGCCAGGACCC CTCCACTGTCCCGGAGGAAAGCTGTAGACATGCGGCTGCGGATGGAGTTGGGTGCTCCAGAAGAGATGGGGCAGG TGCCCCCACTTGACTCTCGCCCCAGCTCCCCAGCCCTCTACTTCACCCACGATGCCAGCCTGGTTCACAAATCTC CAGACCCCTTCGGAGCAGTAGCAGCTCAGAAGTTCAGCCTGGCCCACTCCATGTTGGCCATCAGTGGTCACCTAG ACAGCGACGATGATAGTGGCTCCGGAAGCCTGGTTGGCATTGACAACAAAATCGAGCAAGCCATGGACTTGGTGA AGTCCCACCTCATGTTTGCGGTCCGGGAGGAGGTGGAGGTGCTGAAGGAGCAGATCCGGGAACTGGCGGAGCGGA ACGCTGCGCTGGAGCAGGAGAATGGGCTGCTGCGCCCCTGGCCAGCCCGGAGCAGCTGGCTCAGCTGCCCTCCT $\tt CGGGGGTCCCACGGCTTGGGCCCCTGCGCCCAATGGGCCCTCCGTC\underline{TGA}_{GCCTCCCTTACCATGTGCCT}$ TTGGGGCTGCCCGGCCTTGCGTCAGCCGCCTCTTCCTATGCAGCTTTAATGTCCCCGTGTCCCCGGGG TGGGAGTTCAAGGCTCAGTAATGGCCTGGTCCCCCGGCCCCTGCCCCATCTCCTCATCATCCCCAGCCTTGATGG GGACCCCCAGCAGTAGACGGCTTGGGGGAGTCGGAGGCTCCCCGGCAGACACCCCCACCCCCATCTTGTTCCCTT GAGGTGCCTCCTCTCCCCAGGGGAGGGAGTGTGGACAGTATCTGGAAGTTCTGGGATTCAGGTTGTTATT

FIGURE 2332

MSGGKKKSSFQITSVTTDYEGPGSPGASDPPTPQPPTGPPPRLPNGEPSPDPGGKGTPRNGSPPPGAPSSRFRVV KLPHGLGEPYRRGRWTCVDVYERDLEPHSFGGLLEGIRGASGAGGRSLDSRLELASLGLGAPTPPSGLSQGPTS WLRPPPTSPGPQARSFTGGLGQLVVPSKAKAEKPPLSASSPQQRPPEPETGESAGTSRAATPLPSLRVEAEAGGS GARTPPLSRRKAVDMRLRMELGAPEEMGQVPPLDSRPSSPALYFTHDASLVHKSPDPFGAVAAQKFSLAHSMLAI SGHLDSDDDSGSGSLVGIDNKIEQAMDLVKSHLMFAVREEVEVLKEQIRELAERNAALEQENGLLRALASPEQLA QLPSSGVPRLGPPAPNGPSV

GCGTGGTTCCGGGGCGAAGGGAACGCGCGCTCACCGTGCGCGCTCGCGGCCGGGTGGTAGTGGCGGAGGAAAAG GGGTCGGCGCACGCGCGGTTGAGTCCTCGAGTAGTTCGGGTCTCGCGGGCCTCTTGTTTTGGTCTCGCGGGCTAG AGGGGGGAAGGGACAGGGTCCAGGCAGGGGGGGGTTAGGCCCCTTGATCCCCCTCGTTACCCCGACTGGCACGGA ATAAGGGGAGAAATGATCGAGATGGCGGCGGAGAAGGAGCCGTTTCTGGTGCCGGCCCGCCGCCGCCGCCAA AGATGAGTCGGGCGGAGGGGGCCCCCACGGTGCCACCGCACCAAGAGGCCGCCTCTGGGGAGCTCCGCGGCGG GCGGGTGAATTCGGACTGTGACTCTGTTACCTTCCAACTTCCTCCTGGGGGGCAATATCTTTGATCCCCTGAA CCTGAATAGCCTCCTGGATGAGGAAGTGAGCCGCACTCTCAACGCGGAGACCCCTAAGTCATCCCCCCTTCCGGC CAAAGGGCGAGATCCGGTGGAGATCCTCATCCCCAAAGATATTACTGACCCGCTCAGTCTCAATACTTGCACTGA TGAGGGCCATGTAGTTCTTGCTTCGCCACTCAAGACTGGTCGGAAGCGGCATAGACACCGGGGACAGCACCACCA GCAGCAGCAGCCGGAGGGAGTGAGAGCCACCCGTGCCGCCCACAGCCCCTCTCACCCCCTTACTCCACGG GGAGGGCGCCTCACAGCAGCCGCGCACAGGGGCCCAGAACCGGGATGCCCCCCAACCCTATGAACTCAACACAGC CATCAACTGCAGGGATGAAGTGGTGTCTCCCCTTCCATCTGCTCTGCAGGGTCCCTCAGGCTCCCTATCAGCCCC TCCAGCTGCCTCAGTTATCTCTGCACCCCCATCTTCCTCCCGACATCGCAAACGTCGCAGGACTTCCAGCAA GTCGGAGGCAGGGCTAGGGGTGGAGGCCAGGGTTCCAAGGAAAAGGGCCGAGGGAGTTGGGGAGGCCGCCACCA CCACCACCACCCACTGCCTGCAGCAGGCTTCAAAAAGCAACAGCGCAAGTTCCAGTATGGGAATTATTGCAAATA CTATGGGTACCGCAATCCTTCCTGTGAGGATGGGCGCCTTCGGGTGTTGAAGCCTGAGTGGTTTCGGGGCCGGGA GGGCCTGGATATCGATTCCCGGCTCATCCATTCTGCCCGCCAAAACATCCGACACTACCTTTCCGAGGAGCTGCG TCTCCCACCCCAGACTTTGGAAGGGGACCCGGGGGCAGAGGGTGAGGAAGGGACCACCACCGTTCGAAAGAGGAG ATCAGTCTTCCCCAACAATGTTGTCTTCGTCACGGGTAATTATGTGCTGGATCGAGATGACCTGGTGGAGGCCCA AACACCTGAGTATGATGTGGTGCTCTGCCTCAGCCTCACCAAGTGGGTGCATCTGAACTGGGGAGACGAGGGCCT GAAGCGCATGTTTCGCCGGATCTACCGGCACCTACGCCCTGGGGGCATCCTGGTCCTAGAGCCCCAACCCTGGTC GTCGTATGGCAAGAGAAAGACTCTTACAGAAACGATCTACAAGAACTACTACCGAATCCAATTGAAGCCAGAGCA GTTCAGTTCCTACCTGACATCCCCAGACGTGGGCTTCTCCAGCTATGAGCTTGTGGCCACACCCCACAACACCTC TAAAGGCTTCCAGCGTCCTGTGTACCTGTTCCACAAGGCCCGATCCCCCAGCCAC<u>TAA</u>GTGGCCCCCTAAACAGA AAGTGTGAAGAGGCTGCCCTCGCTGCTCATAAGGACCTGGGGGAAGAGGAAAGTGTCCCAAGGTCTTTCCTTTCT TGCCTCTGGCACCTGCGCAGCAAGGCTGGCTGTGCTGGAGTCACCATCATCTTCCTCTCCCCCAGCCTCCCAGGC TGGATGGCATGGACTGTTTGCTGACCTCTGTTCTCTTAGGGCATGGGAGGTGGGAGGATATCAAATTCTCTAGCC CTTTCCTCCTATTCTCTAGCCCTTCTATTCTCCCAAGGAGAGATTCCCATTTCTCCTCGGCCATTGTACCTAG CTCTTGTCCCTAGCTGCATTTCAGTGGACCATGGATAGAGGGACTGAGGGTTAGACGGAGAAGACTGGCAGGGAG GCACGCAGGTACTGTGAAAATCCTTCCCTTTGCCCTCCCCCAGTGGGAGAGGGGGTTGGGTTTTCAATGTGAGAA AAAAA

MVGLDIDSRLIHSARQNIRHYLSEELRLPPQTLEGDPGAEGEEGTTTVRKRSCFPASLTASRGPIAAPQVPLDGA DTSVFPNNVVFVTGNYVLDRDDLVEAQTPEYDVVLCLSLTKWVHLNWGDEGLKRMFRRIYRHLRPGGILVLEPQP WSSYGKRKTLTETIYKNYYRIQLKPEQFSSYLTSPDVGFSSYELVATPHNTSKGFQRPVYLFHKARSPSH

 ${\tt GGCACGAGGGGAAGTGGCTGTTTGGCTGCTGACAACATGAAGACTTCCTGCG} \underline{\textbf{ATG}} \underline{\textbf{AGAACAGAGGCACAGGTGCC}}$ GACCTTGTGTGTCACTGCGGGGACCCCGGAGGTGTGGGTTCAAGTTCGGATGGAGGCCACCGAGCTCTCGTCCTT TGGGGGGACCACGCTGGCTGTTTGCACCCAGAACGTGGCATCCGGCAATGGGCCCCTGCTCGCCAGGCCCGCTG GGAAACCCAGAGCAGCATCTCTCATCCTGGAAGGCTCTGGGGCCAGCAGCCCCTGCGCCAACACCACCTTCTG $\verb|CTCTGCCCGGCCGACTCCTGCCCCCATTCTGCGGGCAGACCTGGCCGGGATCTTGGGGGGTCTCAGGAGTCCTCCT|\\$ $\tt CTTTGGCTGTTCTACCTCCTTCATCTGCTGCGCCGACATAAGCACCGCCCTGCCCCTAGGCTCCAGCCGTCCCG$ CACCAGCCCCCAGGCACCGAGAGCACGAGCATGGGCACCAAGCCAGGCCTCCCAGGCTGCTCTTCACGTCCCTTA TGCCACTATCAACACCAGCTGCCGCCCAGCTACTTTGGACACAGCTCACCCCCATGGGGGGCCGTCCTGGTGGGC GTCACTCCCCACCCACGCTGCACACCGGCCCCAGGGCCCTGCCGCCTGGGCCTCCACACCCCATCCCTGCACGTGG ${\tt TCTTTTCCCTGACCCTCGGGGGCCCAGGGCCATGGAAGGACCCTTAGGAGTTCGA} \underline{{\tt TGA}}{\tt GAGAGACCATGAGGCCA}$ AAAA

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MRTEAQVPALQPPEPGLEGAMGHRTLVLPWVLLTLCVTAGTPEVWVQVRMEATELSSFTIRCGFLGSGSISLVTV SWGGPDGAGGTTLAVLHPERGIRQWAPARQARWETQSSISLILEGSGASSPCANTTFCCKFASFPEGSWEACGSL PPSSDPGLSAPPTPAPILRADLAGILGVSGVLLFGCVYLLHLLRRHKHRPAPRLQPSRTSPQAPRARAWAPSQAS QAALHVPYATINTSCRPATLDTAHPHGGPSWWASLPTHAAHRPQGPAAWASTPIPARGSFVSVENGLYAQAGERP PHTGPGLTLFPDPRGPRAMEGPLGVR

AAGGGTCTAGGATACAGTCTTTGTAGATGAGCGGGTCCCCCTTGGAGGACAGAATGAAGAATTGGGAAATCATGG TACCCCGCCGGAGATTCCCTTCCGACGCCCGCACCGCCTCCCCGTCACTCATTCTAGGCCCGCACGGTGATTGG GCGACGTTTCGCGCCAATTTCGGTTGGCCGGCCACAGTCCACCGCGCGGAGATTCTCAGCTTCCCCAGGAGCAAG ACCTCTGAGCCCGCCAAGCGCCGCCACGGCCCTCGGCAGCGATGGCACTGAAGGACTACGCGCTAGAGAAGGA AAAGGTTAAGAAGTTCTTACAAGAGTTCTACCAGGATGATGAACTCGGGAAGAAGCAGTTCAAGTATGGGAACCA GTTGGTTCGGCTGGCTCATCGGGAACAGGTGGCTCTGTATGTGGACCTGGACGACGTAGCCGAGGATGACCCCGA GTTGGTGGACTCAATTTGTGAGAATGCCAGGCGCTACGCGAAGCTCTTTGCTGATGCCGTACAAGAGCTGCTGCC TCAGTACAAGGAGGGAAGTGGTAAATAAAGATGTCCTGGACGTTTACATTGAGCATCGGCTAATGATGGAGCA GCGGAGTCGGGACCCTGGGATGGTCCGAAGCCCCCAGAACCAGTACCCTGCTGAACTCATGCGCAGATTGTGAGT GTATTTTCAAGGCCCTAGCAGCAACAAGCCTCGTGTGATCCGGGAAGTGCGGGCTGACTCTGTGGGGAAGTTGGT AACTGTGCGTGGAATCGTCACTCGTGTCTCTGAAGTCAAACCCAAGATGGTGGCCCACTTACACTTGTGACCA GTGTGGGGCAGAGACCTACCAGCCGATCCAGTCTCCCACTTTCATGCCTCTGATCATGTGCCCAAGCCAGGAGTG CCAAACCAACCGCTCAGGAGGGCGGCTGTATCTGCAGACACGGGGCTCCAGATTCATCAAATTCCAGGAGATGAA GATGCAAGAACATAGTGATCAGGTGCCTGTGGGAAATATCCCTCGTAGTATCACGGTGCTGGTAGAAGGAGAAA CACAAGGATTGCCCAGCCTGGAGACCACGTCAGCGTCACTGGTATTTTCTTGCCAATCCTGCGCACTGGGTTCCG ACAGGTGGTACAGGGTTTACTCTCAGAAACCTACCTGGAAGCCCATCGGATTGTGAAGATGAACAAGAGTGAGGA TGATGAGTCTGGGGCTGGAGAGCTCACCAGGGAGGAGCTGAGGCAAATTGCAGAGGAGGATTTCTACGAAAAGCT GGCAGCTTCAATCGCCCCAGAAATATACGGGCATGAAGATGTGAAGAAGGCACTGCTGCTCCTGCTAGTCGGGGG CAAGTCTCAGCTCCTGTCATACATTGATCGACTGGCGCCTCGCAGCCAGTACACAACAGGCCGGGGCTCCTCAGG AGTGGGGCTTACGGCAGCTGTGCTGAGAGACTCCGTGAGTGGAGAACTGACCTTAGAGGGTGGGGCCCTGGTGCT GGCTGACCAGGGTGTGTGCTGCATTGATGAGTTCGACAAGATGGCTGAGGCCGACCGCACAGCCATCCACGAGGT CATGGAGCAGCCAGCCATCTCCATTGCCAAGGCCGGCATTCTCACCACACTCAATGCCCGCTGCTCCATCCTGGC TGCCGCCAACCCTGCCTACGGGCGCTACAACCCTCGCCGCAGCCTGGAGCAGAACATACAGCTACCTGCTGCACT TTACATAGCCATGTGCCGCGAGAAGCAGCCCATGGTGCCAGAGTCTCTGGCTGACTACATCACAGCAGCATACGT GGAGATGAGGCGAGAGGCTTGGGCTAGTAAGGATGCCACCTATACTTCTGCCCGGACCCTGCTGGCTATCCTGCG AATGGAGATGTCAAAGGACTCTCTTCTAGGAGACAAGGGGCAGACAGCTAGGACTCAGAGACCAGCAGATGTGAT ATTTGCCACCGTCCGTGAACTGGTCTCAGGGGGCCGAAGTGTCCGGTTCTCTGAGGCAGAGCAGCGCTGTGTATC TCGTGGCTTCACACCCGCCCAGTTCCAGGCGGCTCTGGATGAATATGAGGAGCTCAATGTCTGGCAGGTCAATGC TTCCCGGACACGGATCACTTTTGTCTGATTCCAGCCTGCTTGCAACCCTGGGGTCCTCTTGTTCCCTGCTGGCCT GCCCCTTGGGAAGGGGCAGTGATGCCTTTGAGGGGAAGGAGGAGCCCCTCTTTCTCCCATGCTGCACTTACTCCT TTTGCTAATAAAAGTGTTTGTAGATTGTCATCTTCTAGCCTGGGCCTGACTTCCATTAAAACAGGGTTTTGTGCG TTTTTTAGATTCCTGTTCGTTTTTATGCTATTTCATCCACTCAGTAAATTACCTGAGTAAAGTGCATCTCCCTGC CAGGCCCCAGTATAGACACTGGGGATGCGGCAAGGACTAAGCGGTCCCTGCTGTTTGGAGATACTTAAGATGGG GCTCCACTTTTGAGCCCCCCGACTCCCT

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GGCACGAGGGGAAAATGGCGGCGGCGGCGGCGGCGGCTGCAGCTACGAACGGGACCGGAGGAAGCAGCGGATGG ${\tt AGGTGGATGCAGCAGTAGTCCCCAGCGTG} \underline{{\tt ATC}} {\tt GCCTGCGGAGTGACTGGGAGTGTTTCCGTCGCTCTCCATCCCC}$ TTGTCATTCTCAACATCTCAGACCACTGGATCCGCATGCGCTCCCAGGAGGGGCGGCCTGTGCAGGTGATTGGGG CTCTGATTGGCAAGCAGGAGGGCCGAAATATCGAGGTGATGAACTCCTTTGAGCTGCTGTCCCACACCGTGGAAG AGAAGATTATCATTGACAAGGAATATTATTACACCAAGGAGGAGCAGTTTAAACAGGTGTTCAAGGAGCTGGAGT TTCTGGGTTGGTATACCACAGGGGGGCCACCTGACCCCTCGGACATCCACGTCCATAAGCAGGTGTGTGAGATCA TCGAGAGCCCCCTCTTTCTGAAGTTGAACCCTATGACCAAGCACACAGATCTTCCTGTCAGCGTTTTTGAGTCTG TCATTGATATAATCAATGGAGAGGCCACAATGCTGTTTGCTGAGCTGACCTACACTCTGGCCACAGAGGAAGCGG AACGCATTGGTGTAGACCACGTAGCCCGAATGACAGCAACAGGCAGTGGAGAACTCCACTGTGGCTGAACACC TGATAGCACAGCACAGCGCCATCAAGATGCTGCACAGCCGCGTCAAGCTCATCTTGGAGTACGTCAAGGCCTCTG ${\tt AAGCGGGAGAGGTCCCCTTTAATCATGAGATCCTGCGGGAGGCCTATGCTCTGTGTCACTGTCTCCCGGTGCTCACTGTCTCACTGTCTCCCGGTGCTCACTGTCACTGTC$ GCACAGACAAGTTCAAGACAGATTTTTATGATCAATGCAACGACGTGGGGCTCATGGCCTACCTCGGCACCATCA ${\tt GAATGCGCGGGCTCTTTTC} \underline{{\tt TGA}} {\tt TGAGGGTACTTGAAGGGCTGATGGACAGGGGTCAGGCAACTATCCCAAAGGG}$ ΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑ

MACGVTGSVSVALHPLVILNISDHWIRMRSQEGRPVQVIGALIGKQEGRNIEVMNSFELLSHTVEEKIIIDKEYY
YTKEEQFKQVFKELEFLGWYTTGGPPDPSDIHVHKQVCEIIESPLFLKLNPMTKHTDLPVSVFESVIDIINGEAT
MLFAELTYTLATEEAERIGVDHVARMTATGSGENSTVAEHLIAQHSAIKMLHSRVKLILEYVKASEAGEVPFNHE
ILREAYALCHCLPVLSTDKFKTDFYDQCNDVGLMAYLGTITKTCNTMNQFVNKFNVLYDRQGIGRRMRGLFF

GCTTCCGGCACGGGATGTTTTCGGTTGTTTGACCGAGAGAGTTGTAGGCGCAAAGCTGAGGAAAGGAGAGTGTGG AGAGGGGCCTGGTGTGGGGCCCGGTGTTTGGGACCGGAGGGTGTTGACGGCTGATGAGTTCCTTGGGTTTGC TCTTTCTTCACCTGAAAAGAAGACTCCAGGAAGGGCAGCACATGCCGGAGAAAGATGAATTGCAGCTTGACCGCC CAGAGGCGCGCAGTGACGCCGAGTTGGGACCCTGGGTGATGGCTGCGAGGTCCAAGGACGCGGCGCCCCCAA CGCGACGGACTTTTGCCCGTGAAAGTGGAGGAAGACTCACCCGGAAGTTGGGAGCCCAACTATCCCGCGGCTTCG CCGGACCCCGAAACTTCTCGACTGCACTTTAGGCAGCTGCGTTACCAGGAGGTGGCTGGACCGGAAGAGGCGCTG AGCCGGCTCCGAGAACTCTGTCGTCGGTGGCTGAGACCCGAGCTGCTCTCCAAGGAGCAGATCCTGGAGCTGCTG GTGCTGGAGCAGTTCCTCACCATCCTGCCCGAGGAGCTTCAAGCCTGGGTGCGAGAGCACTGCCCAGAGAGCGGG GAGGAGGCGGTGGCCGTGCTGCGGGCTCTGCAGCGAGCGCTCGATGGAACCTCATCCCAGGGGATGGTGACTTTC GAGGACACGGCTGTGTCTCTAACCTGGGAGGAGTGGGAGCGCCTGGACCCAGCACGGAGGGACTTCTGCAGAGAG AGTGCGCAGAAGGATTCCGGGAGCACAGTTCCGCCGAGTTTGGAAAGCAGAGTGGAGAACAAAGAGTTGATTCCA ATGCAACAATTTTAGAAGAAGCGGAGCCACAGGGGCAACTACAAGAAGCGTTCCAGGGGAAGCGCCCCTGTTT TCTAAGTGTGGCAGTACCCATGAGGACAGGGTGGAAAAGCAGTCCGGAGACCCCTTGCCCCTGAAACTTGAAAAT TCTCCTGAAGCAGAAGGACTCAACAGCATCTCAGATGTCAATAAGAATGGTTCCATAGAAGGGGAAGACTCTAAA AATAATGAATTGCAGAACAGTGCCAGGTGTTCCAACCTTGTTCTATGTCAGCACATCCCGAAAGCAGAGGGCCC ACTGACAGTGAGGAACACGGGAACAAGTGCAAGCAAAGTTTCCACATGGTGACGTGGCACGTGCTGAAACCTCAC TATAAATGTGGTAACTGTGGGAAGAGTTTCAAACAACGCTCTGACCTCTTTAGACACCAGAGAATCCACACAGGT GAGAAACCCTATGGCTGCCAAGAATGTGGGAAAAGCTTCAGCCAGAGTGCTGCCCTGACCAAGCACCAGAGGACA CACACAGGCGAGAAGCCGTACACCTGTCTGAAATGTGGGGAGCGCTTCAGGCAGAATTCACACCTAAATCGTCAT CAAAGTACCCACAGTAGAGACAAACATTTTAAATGTGAGGAATGCGGGGAAACCTGTCATATTTCCAACCTTTTT AGACATCAGAGACTACATAAAGGGGAAAGACCCTATAAGTGTGAAGAATGCGAGAAGAGCTTCAAACAGCGCTCT GACCTCTTTAAACACCACAGAATCCACACTGGGGAGAAGCCCTATGGATGTTCCGTCTGTGGGAAACGCTTCAAT CAGAGTGCAACCCTCATTAAACACCAGAGAATTCACACTGGGGAAAAGCCTTACAAATGTCTTGAATGTGGGGAA AGATTTAGACAAAGTACACCCTTATCCGACACCAAAGAATTCATCAAAATAAAGTGCTGTCGGCTGGGCGTGGT ${\tt GGCTCACGCCTA} \underline{{\tt TAA}} {\tt TCCCAGCACTTTGGGAGGCCAAGGCAGGCAGATCATTTGAGATCAGGAGTTTGAAACCAG}$ CCTGGCCAACATGGTGAAATTCTGTCTCTACTAAAAATACAAAAATGAGCCGGGCATGGTGGTGCATGCCTGTAA GCCCAGCTATTCGGGAGGCTGAGGTAGGAGAATCACTTGAACCCAGGAGGCGGAAGTTGCAGTGAGCTGAGATCA ATGTT

MNCSLTAQRRGSDAELGPWVMAARSKDAAPSQRDGLLPVKVEEDSPGSWEPNYPAASPDPETSRLHFRQLRYQEV
AGPEEALSRLRELCRRWLRPELLSKEQILELLVLEQFLTILPEELQAWVREHCPESGEEAVAVVRALQRALDGTS
SQGMVTFEDTAVSLTWEEWERLDPARRDFCRESAQKDSGSTVPPSLESRVENKELIPMQQILEEAEPQGQLQEAF
QGKRPLFSKCGSTHEDRVEKQSGDPLPLKLENSPEAEGLNSISDVNKNGSIEGEDSKNNELQNSARCSNLVLCQH
IPKAERPTDSEEHGNKCKQSFHMVTWHVLKPHKSDSGDSFHHSSLFETQRQLHEERPYKCGNCGKSFKQRSDLFR
HQRIHTGEKPYGCQECGKSFSQSAALTKHQRTHTGEKPYTCLKCGERFRQNSHLNRHQSTHSRDKHFKCEECGET
CHISNLFRHQRLHKGERPYKCEECEKSFKQRSDLFKHHRIHTGEKPYGCSVCGKRFNQSATLIKHQRIHTGEKPY
KCLECGERFRQSTHLIRHQRIHQNKVLSAGRGGSRL

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 ${\tt MASVGECPAPVPVKDKKLLEVKLGELPSWILMRDFSPSGIFGAFQRGYYRYYNKYINVKKGSISGITMVLACYVL}\\ {\tt FSYSFSYKHLKHERLRKYH}$

 ${\tt TCGCTCGCTCCTTCGCTTCGCCTCGCCGCCGCC} \underline{{\tt ATG}} {\tt CAGGAAATCATCGCCAGCGTGGACCACATCAAGTTT}$ GACTTGGAGATCGCGGTGGAGCAGCAGCTGGGGGCGCAGCCGCTGCCCTTCCCCGGCATGGACAAGTCGGGCGCT GCTGTCTGTGAATTCTTTTTGAAAGCTGCCTGCGGCAAAGGGGGCATGTGTCCGTTTCGCCACATCAGTGGTGAG AAGACAGTTGTGTGCAAACACTGGCTGCGTGGCCTATGCAAGAAAGGGGACCAGTGTGAGTTCCTGCATGAGTAT GACATGACCAAGATGCCCGAGTGCTACTTCTACTCCAAGTTCGGGGAGTGCAGCAACAAGGAATGTCCCTTCCTG CACATCGACCCCGAGTCCAAGATCAAGGACTGTCCTTGGTATGACCGCGGCTTCTGCAAGCACGGTCCCCTCTGC AGGCACCGGCACACGGAGAGTCATCTGTGTGAATTACCTCGTGGGATTCTGCCCGGAGGGGCCCTCGTGTAAA TTCATGCACCCTCGATTTGAACTGCCCATGGGAACCACCGAGCAGCCCCCACTGCCACAGCAGACACACCCTCCA GCAAAGCAAAGTAACAATCCGCCATTACAAAGGTCGTCCTCCTTGATCCAGTTAACGAGTCAGAACTCTTCTCCC AATCAGCAGAGAACCCCGCAGGTCATCGGGGTCATGCAGAGTCAAAACAGCAGCGCGGGCAACCGGGGACCCCGG $\verb|CCACTGGAGCAGGTCACCTGTTACAAGTGTGGCGAGAAAGGACACTACGCCAACAGATGCACCAAAGGGCACTTG|\\$ ATTTAACTGTTTCATGCGCTTGTTGGCGCGACTGTGGCTCGAGCTGGCCCGCAGACACGTGGGTTTCATCACTCT GAGGGGCCACGTCTGTTAGTTTCCTATCATTTTGCCGTAGTATTTTTTGAAAAAGGGACATGTGTCCTGTGGGTC CCTGCAGTCGACATCATGTTTGGCTGGGCATCGATGCCTCCTTTCTGGGACTCCCGGCACAACTCCCCTCATCCA GGGAGGGAGGCAGCTGCTGGGGAGGGGCTTGGCTAGGTAGTTCTGTGTGGCGGTGGTCATTCCCCTCATTAAACA GCCCTGCTGAATCCTAAAGCTGTGCCTATATCTGTGATTTGAATGAGGGAGCCCTTTGGGGCAAATTCAGGTGCC CCCATTGCCTCAGGCTGGCCCTGGTCCCAGGTGGCAGCGGTTGAGGAGGGGTACAGGGCTCTCAAGCCTGAGGTT TTCTTCTCTGGGGCTTAATTTTCTCTTGGGGTACGTGCCTGACAGTGTTTAAGGTGTCCGTTGAACTGGAGTTGCA GACTTTTAAATAGATGACCCCTTCAGATCATCTGTGCCTACCTCCTGCCCATCAGGCGTCTACACTGTCACTCAG ACACCTGTGGCATGTGGAGGAGACTGCCCTGTCCTGAGCCTGGAAAATGTGAAACTGTCTCCTGCAACCTGCTGG GCATGTGGGCCTGGCTGTTCAATTGCAAGAACAATTTTTATGAAATGGATTAAAGCTTGTTTTTT

MQEIIASVDHIKFDLEIAVEQQLGAQPLPFPGMDKSGAAVCEFFLKAACGKGGMCPFRHISGEKTVVCKHWLRGL CKKGDQCEFLHEYDMTKMPECYFYSKFGECSNKECPFLHIDPESKIKDCPWYDRGFCKHGPLCRHRHTRRVICVN YLVGFCPEGPSCKFMHPRFELPMGTTEQPPLPQQTQPPAKQSNNPPLQRSSSLIQLTSQNSSPNQQRTPQVIGVM QSQNSSAGNRGPRPLEQVTCYKCGEKGHYANRCTKGHLAFLSGQ WO 2004/030615 PCT/US2003/028547

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 ${\tt MPKVKRSRKAPPDGWELIEPTLDELDQKMREAETEPHEGKRKVESLWPIFRIHHQKTRYIFDLFYKRKAISRXXXXXXXXXXXKNLIAKWKKQGYENLCCLRCIQTRDTNFGTNCICRVPKSKLEVGRIIECTHCGCRGCSG$

CCATCTGCCCCAACAACCATGAGGTGCATATCTATGAAAAGAGCGGTGCCAAATGGACCAAGGTGCACGAGCTCA GCAACGCCTACGTGTGGACGCTGAAGGGCCGCACATGGAAGCCCACGCTGGTCATCCTGCGGATCAACCGGGCTG $\verb|CCCGCTGCGTGCGCCCCCAACGAGAACAAGTTTGCTGTGGGCAGCGGCTCTCGTGTGATCTCCATCTGTT|\\$ ATTTCGAGCAGGAGAATGACTGGTGGGTTTGCAAGCACATCAAGAAGCCCATCCGCTCCACCGTCCTCAGCCTGG ACTGGCACCCCAACAATGTGCTGCTGGCTGCCGGCTCCTGTGACTTCAAGTGTCGGATCTTTTCAGCCTACATCA AGGAGGTGGAGGAACGGCCGGCACCCACCCCGTGGGGCTCCAAGATGCCCTTTGGGGAACTGATGTTCGAATCCA GCACCGTCTGCCTGGCTGATGCCGACAAGAAGATGGCCGTCGCGACTCTGGCCTCTGAAACACTACCACTGCTGG CGCTGACCTTCATCACAGACAACAGCCTGGTGGCAGCGGGCCACGACTGCTTCCCGGTGCTGTTCACCTATGACG GCGAGCGCTTCCAGAACCTGGACAAGAAGGCGAGCTCCGAGGGTGGCACGGCTGCGGGCGCGGGCCTAGACTCGC TGCACAAGAACAGCGTCAGCCAGATCTCGGTGCTCAGCGGCGGCAAGGCCAAGTGCTCGCAGTTCTGCACCACTG ${\tt GCATGGATGGCGGCATGAGTATCTGGGATGTGAAGAGCTTGGAGTCAAGCCTTGAAGGACCTCAAGATCAAA\underline{{\tt TGA}}{\tt C}$ CTGTGAGGAATATGTTGCCTTCATCCTAACTGCTGGGGAAGCGGGGAGAGGGGTCAGGGAGGCTAATGGTTGCTT AAA

MAYHSFLVEPISCHAWNKDRTQIAICPNNHEVHIYEKSGAKWTKVHELKEHNGQVTGIDWAPESNRIVTCGTDRN AYVWTLKGRTWKPTLVILRINRAARCVRWAPNENKFAVGSGSRVISICYFEQENDWWVCKHIKKPIRSTVLSLDW HPNNVLLAAGSCDFKCRIFSAYIKEVEERPAPTPWGSKMPFGELMFESSSSCGWVHGVCFSASGSRVAWVSHDST VCLADADKKMAVATLASETLPLLALTFITDNSLVAAGHDCFPVLFTYDAAAGMLSFGGRLDVPKQSSQRGLTARE RFQNLDKKASSEGGTAAGAGLDSLHKNSVSQISVLSGGKAKCSQFCTTGMDGGMSIWDVKSLESALKDLKIK

FIGURE 2350

CAGCTTTCTCCTTTGAAAACACTAAGAATAATGTCACTGCATCAGTTTTTACTAGAGCCAATCACCTGTCATG CCTGGAACAGGGATCGTACTCAGATTGCCCTCAGTCCCAATAATCACGAAGTGCACATCTATAAGAAGAACGGGA GCCAGTGGGTGAAAGCTCATGAACTCAAGGAGCACAACGGACACATCACAGGTATTGACTGGGCTCCCAAGAGCG ACCGCATTGTCACTTGTGGGGCAGACCGCAATGCCTATGTCTGGAGTCAGAAAGATGGTGTTTGGAAGCCAACCC TGGTGATCCTGAGAATTAATCGCGCAGCTACTTTTGTGAAGTGGTCCCCCCTAGAGAACAAATTTGCTGTGGGAA CGATTCGCTCCACAGTCCTCAGCTTGGATTGGCATCCCAACAACGTTTTGCTGGCAGCAGGATCATGTGACTTCA CTTTTGGGCAGCTGATGTCAGAGTTTGGTGGCAGTGGCACTGGTGGCTCCACGGGGTAAGCTTCTCTGCCA GTGGGAGCCGCCTGGCCTGGGTCAGCCACGACAGCACCGTGTCTGTTGCTGATGCCTCAAAAAGTGTGCAGGTCT ATGACTGCTGCCCAATGCTCTTTAACTACGATGACCGCGGCTGCCTGACCTTCGTCTCCAAGTTAGATATTCCAA AACAGAGCATCCAACGCAACATGTCTGCCATGGAACGCTTCCGCAACATGGACAAGAGAGCCACAACTGAGGACC GTCGCAAATTTTGCACTACTGGCATCGATGGAGCCATGACAATTTGGGATTTCAAGACCCTCGAGTCTTCCATCC AGGGCCTCCGGATAATGTGAAGCTGAGTG

2557/6881 FIGURE 2351A

GCACTCTCGGGCCGACGCTGCGGCGGCGGCCGACCCTCCAGAGCCCCTTAGTCGCGCCCCGGCCCTCCCGCTGC CCGGAGTCCGGCGGCCACGAGGCCCAGCCGCGTCCTCCCGCGCTTGCTCGCCCGGCGGCCGCAGCCATGTCCCGG GGGCCCGAGGAGGTGAACCGGCTCACGGAGAGCACCTACCGGAATGTTATGGAACAGTTCAATCCTGGGCTGCGA AATTTAATAAACCTGGGGAAAAATTATGAGAAAGCTGTAAACGCTATGATCCTGGCAGGAAAAGCCTACTACGAT GGAGTGGCCAAGATCGGTGAGATTGCCACTGGGTCCCCCGTGTCAACTGAACTGGGACATGTCCTCATAGAGATT TCAAGTACCCACAAGAAACTCAACGAGAGTCTTGATGAAAATTTTAAAAAATTCCACAAAGAGATTATCCATGAG CTGGAGAAGAAGATAGAACTTGACGTGAAATATATGAACGCAACTCTAAAAAGATACCAAACAGAACACAAGAAT AAATTAGAGTCTTTGGAGAAATCCCAAGCTGAGTTGAAGAAGATCAGAAGGAAAAGCCAAGGAAGCCGAAACGCA CTCAAATATGAACACAAAGAAATTGAGTATGTGGAGACCGTTACTTCTCGTCAGAGTGAAATCCAGAAATTCATT GCAGATGGTTGCAAAGAGGCTCTGCTTGAAGAGAAGAGGCGCTTCTGCTTTCTGGTTGATAAGCACTGTGGCTTT GCAAACCACATACATTATTATCACTTACAGTCTGCAGAACTACTGAATTCCAAGCTGCCTCGGTGGCAGGAGACC TGTGTTGATGCCATCAAAGTGCCAGAGAAAATCATGAATATGATCGAAGAAATAAAGACCCCAGCCTCTACCCCC GTGTCTGGAACTCCTCAGGCTTCACCCATGATCGAGAGAAGCAATGTGGTTAGGAAAGATTACGACACCCTTTCT AAATGCTCACCAAAGATGCCCCCCGCTCCTTCAGGCAGAGCATATACCAGTCCCTTGATCGATATGTTTAATAAC CCAGCCACGGCTGCCCCGAATTCACAAAGGGTAAATAATTCAACAGGTACTTCCGAAGATCCCAGTTTACAGCGA TCAGTTTCGGTTGCAACGGGACTGAACATGATGAAGAAGCAGAAAGTGAAGACCATCTTCCCGCACACTGCGGGC TCCAACAAGACCTTACTCAGCTTTGCACAGGGAGATGTCATCACGCTGCTCATCCCCGAGGAGAAGGATGGCTGG GAGACAGAAGCAGTGACCGTGCCCACGCCAAGCCCCACACCAGTGAGAAGCATCAGCACCGTGAACTTGTCTGAG AATAGCAGTGTTGTCATCCCCCCACCCGACTACTTGGAATGCTTGTCCATGGGGGCAGCTGCCGACAGGAGAGCA GATTCGGCCAGGACGACATCCACCTTTAAGGCCCCAGCGTCCAAGCCCGAGACCGCGGCTCCTAACGATGCCAAC GGGACTGCAAAGCCGCCTTTTCTCAGCGGAGAAAACCCCTTTGCCACTGTGAAACTCCGCCCGACTGTGACGAAT GATCGCTCGGCACCCATCATTCGATGAGAGGACAGCCAAGGACTCTCCCGGGCCTCTCCGGTTCTCCCTTGCGGA ATGATGGCGCATCCTGTCTGCCACGTGCTGACGGTCGGGAAGCTTCAGTGGAGAGGCCTAACTCTAATGTCGCC TGCTTAAGCAAATCATGCTTCTCTGTTTCACGTAGTTGGGTTGACAAGTTTCTGCCTTTAAGATAAATGAGTAAT AGTCTAATGACCAGCTCAGCCATTTAAAATATTTTCTTCCTATTCTGTTCAAGAAACAGTAAACTTGGTTTCAAT CTTTACTGTATTTTTAAATGAATTTTTTCCTTAATAACAGCCAGAATAAGGGATAGTCTATGCTTTCAGGACTG GCTTTCTGCACCTGATATGAATGAGACCAGTTTTATTTTATAAAGCATGTGCTCTTAATAGCATTATGTCTAAAG AAGATATCACGTAAGTTTGCATCTTAGCATGCAAATCATAATTTTAAGCAATATAAATTATGAAAAATACTATATA CCAGAGCTGTAGAGTGCTAAGACGCTTTGCCTGCCCTTATCACAGCCACACGTAGCACTCGACGAAATCTCCTCC GAGAGCTCCTTTTCTTGGTAGTTAGGAGTCGCCAACGGATTCGCTGCACACGGCCCATCCAGGACACAGGCCTGG GCGTCGGAGTCACGGCTCCTTGTGTTCTCACTCAGCTAGTTGGCCAAAGCTGCATCCATTACCAGTACACTCAAA $\verb|CTGCTCGGGGTCCTGGTTTCTCCGTGTTTGAATCAGGTACAGACTCTCAAAGGATACGTGTAAAGCCAGGATGAC| \\$ CTCTGGTGCCTGGAGAAGGGCGGGTTTTTCAGCCTAGCAGCCATGATGCCCTCGGAACCTGGCCCTATGGTATGG ATGTGAGGACTACGCACTGGCTGCCCTGAGCCCGGGGCTGGAAATCATCTTTGGCTGCCAAGGATCTGGACCTAT TTTGGAGTGGAGAGTCATGGTTAAAATTCCCAGCCCGGCCCAGGTACGGGAATCCCAGCATTTTGTGAGGCCGAG GCAGGGGGATCACCTGAGGTCAGGAGTCTCTACTAAAAATACAAAAATTAGACAGGTGTGGTGGTGGCGCCCACT CAGGAGGCTGAGGCAGAATCACTTGAACCCGGGAGGCAGAGGTTGCAGTGAGCCAGATCATGCTGCACT ${\tt CCAGCCGGCCGCTCACCGTGTGTTGCTGGGTGCTGGGGCTGTGACTTATCCCCTCTCTTTAGCCTTGCCAT}$ AAGTGTAGTATCCTATGAGGCTGAGATTGGGAAAGGTTACATGCAGGTAAGCCAGTGGACGTGGCCGATGCTTCA GGCTCCTTCCAGCCAGGTCCAGCAGTGTTACCATCTGCTTCTCCTGGGAGGACAAACCAGGCACCCCCACCATGA AGGGGCTGCAGGCACCATGAACTATGTTAACAACCCCAGTCTGTACTACAGAAAGGGCTGCAGCCACATGAGAAT TCAGTCCACACAAGCCCCATGGCCGTGTTCCCCACTTCAGCCACAGGGCTCAGGGAGCCCCATCTGGCGCTAAGG GGAACTGCTGGGGTGTGGGTGACACCTGGCCTTTGGCGTTCTGCCTTGGGGAGGTTTCTGGTTTTGTTACGGGGT GGAAGAATAGGACCTGGGGGTCTCGGATGCAACCTGCAGACCCCGTGGCTCACCCCAACCCCAGGTTCTGCCTCCC AGACCAGAACGGGCATGGCCTGGTCCTTGGCACCGAGGTGCCTGCTCTGTAAATATCAAGGGATTACAACTTTAA

2558/6881 FIGURE 2351B

TAATAAAGCAGAACTTG

2560/6881 FIGURE 2353A

GCCGAGAGGAGGCCTATGAGAATCAGCGCTGGAATCCCATGGGCGGCTTCTGTGAGAAGCTCCTGAGTGACC GCTGGGGGTGAGTGACTGGGTCCACCACCGCCCTGGACAGGGTGGCACTGCCCTCGCCGCACTGGG AGTGGGAGTCTGACTGGTACGTGGATGAGAATTTTGGAGGTGAACCCACTGAGAAAGGGGGGGTGGACGTACGCCA TCGACTTTCCCGCCACCTACACGAAAGACAAGAAGTGGAATTCTTGTGTGCGGCGCCGGAAGTGGATCCGGTACA GGAGATACAAGTCCCGGGACATCTGGGCCAAGATCCCCTCGAAGGATGACCCCAAGGAGCTGCCCGACCCCTTCA ACGACCTCTCTGTAGGGGGGCTGGGAGATCACGGAGGAGCCTGTGGGCCGCCTGTCAGTGTGGGCTGTGTCTCTGC TCCGGGAAGGAATCAACAGGAGCAATCCCAAAGGAAGTTCCTGGTCCATCGTGGAGCCTCCTGGATCTGAAAACG GGGTCATGCACATCTCGGTGGGAGTCAGCGTGGTCTGGGCTGTCACCAAGGACTGGAAGGTGTGGTTCCGAAGAG TGAACGACCAGGTGTGGGGCATTGGCTGTGAGGACCGAGCCGTGTACTTCCGGCAGGGTGTCACCCCCAGCGAGC TCAGTGGGAAGACCTGGAAAGCCATCATCGCGGCCCGAGAGTGTGACCGGTCACACTCTGGCAGCTCGTCTAGTC TCCTCAGTGCCGGCTGCTTCTTCGGTGATGAGGTGAGGGGTAGTGGCGAGTCTGCCCCCAGCGACACCGATGCCT CCTCGGAAGTCGAGAGACCAGGGCCTGGCCAGATTCTCCCTGCAGAACCTCTAGACGATTCCAAGAATGCCACAG GCAGGGAGGCCAGACCCAACACGCACCCCGGCCCGGCCCCACCCCGGCCGAGCTGCCCTGGACCAATATTGACC TCCTCCCACTGGGCTTGGAGGAGCCGTATGGGGTGGATGACCACCCGCTGTGGGCCTGGGTGTCGGGAGGCGGCT GCGTGGTGGAGGCATGTGCCATGCCCAGATGGTTCACTGTCCAGGCGGGCCTGTCCTCCGCTACACATGCTGT CCCTGTCCATCACGCCGGCCCAGACCGCTGCCTGGAGGAGCAGATCTTCCAGCAGCTCACGGAAAGGACCAAGC GGGAGCTGGAGAACTTCAGACACTACGAGCAGGCCGTGGAGCAGTCGGTGTGGGTGAAGACCGGGGCGCTGCAGT GGTGGTGCGACTGGAAGCCCCACAAGTGGGTGGACGTGCGCTTGGCCCTGGAGCAGTTCACGGGGCACGACGGCG TCCGGGACAGCATCCTCTTCATCTACTATGTGGTCCACGAGGAGAAGAAGTACATCCACATATTCCTGAATGAGG TGGTGGCGCTGGTCCCAGTGCTGAACGAGACCAAGCACTCCTTTGCCCTGTACACCCCTGAGCGGACACGGCAGA GCGAGAGCCGGAAGGTGCAGGGCCGCCCGTCCCCGCAGGCCATCTGGTCCATCACCTGCAAGGGGGACATCTTCG TGAGCGAGCCCAGACCTGGAGGCCCACGAGCACCCCTGCCCTGCGACCAGATGTTTTGGCGGCAGATGG GAGGCCACCTGCGGATGGTGGAGGCCAACAGCCGGGGCGTGGTGTGGGGCATCGGCTATGACCACACGGCCTGGG TATACACAGGCGGCTATGGAGGCGGCTGCTTCCAAGGCCTGGCCAGCAGCACCAGTAACATCTACACGCAGTCAG ACGTGAAGTGTGTCACATCTATGAGAACCAGCGCTGGAACCCCGTCACAGGCTACACCAGCAGGGGTCTGCCCA CGGACCGGTACATGTGGAGCGATGCCTCGGGGCTGCAGGAGTGCACGAAGGCTGGCACGAAGCCCCCGTCCCTGC AGTGGGCCTGGGTTTCCGACTGGTTCGTGGATTTCAGCGTTCCGGGGGGCACGGACCAGGAGGGGTGGCAGTATG CCAGCGACTTCCCTGCCTCATACCATGGGTCCAAAACGATGAAGGATTTTGTGAGGAGGAGGTGCTGGGCCAGAA AATGCAAGCTGGTGACCAGTGGGCCCTGGCTGGAGGTGCCCCCCATCGCCCTCAGGGACGTGTCCATCATCCCGG AGAGCCCGGGTGCCGAGGGGAGTGGGCACAGCATCGCCCTCTGGGCCGTCAGCGACAAGGGGGATGTGCTGTGCC GCCTGGGCGTGTCGGAGCTCAACCCTGCGGGCTCCTCCTGGCTGCACGTTGGCACCGACCAGCCCTTCGCCTCCA TCTCCATCGGGGCCTGCTACCAGGTGTGGGCCGTGGCAAGGGACGGCTCCGCCTTCTACCGGGGATCCGTGTACC CCTCGCAGCCAGCCGGTGACTGCTGGTACCACATCCCGTCCCCACCGAGACAGAGGCTGAAGCAGGTGTCCGCGG GGCAGACGTCGGTGTATGCCCTGGATGAGAATGGAAACCTGTGGTATCGCCAAGGGATCACGCCCAGCTACCCGC AGGGCTCCAGCTGGGAGCACGTGTCCAACAACGTGTGCCGAGTGTCCGTGGGGCCCCTGGACCAGGTCTGGGTGA TCGCCAACAAGTGCAGGGCAGCCACAGCCTGAGCCGGGGGACAGTGTGTCATCGCACCGGCGTGCAGCCTCACG GGGCCCCCGGAGCTCGTCCCAGGAGCAGGAGCCGAGTGCCCCACCAGAGGCCCATGGCCCCGTCTGCTGAG GCCCCCCACACCTACATGCAGGGACGGTGCCCAGTTTGGGGGATCAAGGCTGAGCCATTCTTGTGCTGGAGT GTGCACCGTGGGAGCAATGTGGCCCAGGTGGACTCAGGAGGGAACCTGGCCCCAAGGCTGCGGCCACTTCAGAGG CACTGGCTGAGACGCCCTGAAATGTGAAGCTCCGCGGACACTCCCACACGTGTCCCCGTCTGCGAGGAGTCCCG

2561/6881 FIGURE 2353B

 ${\tt MGWGCTSQRPLPPFPSPLPSAFPGLEPGTWSPPGTPALGQQSQDGALLSWHLRQHPGPPPLTKRDGHGAQGLFTMCSDHFSEQDLQRGFNFKSEGRRPGAVAHACNPSTLGG}$

AAACTTCCCGCACGCGTTACAGGAGCCAGGTCGGTATAAGCGCCAGCGGCCTCGCCGCCCGTCAAGCTGTCCACA TCCCTGGCCTCAGCCCGCCACATCACCCTGACCTGCTTACGCCCAGATTTTCTTCAATCACATCTGAATAAATCA $\tt CTTGAAGAAAGCTTATAGCTTCATTGCACC \underline{ATG} \texttt{TGTGGCATTTGGGCGCTGTTTGGCAGTGATGATTGCCTTTCT}$ GTTCAGTGTCTGAGTGCTATGAAGATTGCACACAGAGGTCCAGATGCATTCCGTTTTGAGAATGTCAATGGATAC ACCAACTGCTTTTGGATTTCACCGGTTGGCGGTAGTTGACCCGCTGTTTGGAATGCAGCCAATTCGAGTGAAG AAATATCCGTATTTGTGGCTCTGTTACAATGGTGAAATCTACAACCATAAGAAGATGCAACAGCATTTTGAATTT GAATACCAGACCAAAGTGGATGGTGAGATAATCCTTCATCTTTATGACAAAGGAGGAATTGAGCAAACAATTTGT ATGTTGGATGGTGTGTTTGCATTTGTTTTACTGGATACTGCCAATAAGAAAGTGTTCCTGGGTAGAGATACATAT GGAGTCAGACCTTTGTTTAAAGCAATGACAGAAGATGGATTTTTTGGCTGTATGTTCAGAAGCTAAAGGTCTTGTT ACATTGAAGCACTCCGCGACTCCCTTTTTAAAAGTGGAGCCTTTTCTTCCTGGACACTATGAAGTTTTGGATTTA AAGCCAAATGGCAAAGTTGCATCCGTGGAAATGGTTAAATATCATCACTGTCGGGATGAACCCCTGCACGCCCTC TATGACAATGTGGAGAAACTCTTTCCAGGTTTTGAGATAGAAACTGTGAAGAACAACCTCAGGATCCTTTTTAAT AATGCTGTAAAGAAACGTTTGATGACAGACAGAAGGATTGGCTGCCTTTTATCAGGGGGGCTTGGACTCCAGCTTG GTTGCTGCCACTCTGTTGAAGCAGCTGAAAGAAGCCCCAAGTACAGTATCCTCTCCAGACATTTGCAATTGGCATG GAAGACAGCCCCGATTTACTGGCTGCTAGAAAGGTGGCAGATCATATTGGAAGTGAACATTATGAAGTCCTTTTT AACTCTGAGGAAGGCATTCAGGCTCTGGATGAAGTCATATTTTCCTTGGAAACTTATGACATTACAACAGTTCGT GCTTCAGTAGGTATGTATTTAATTTCCAAGTATATTCGGAAGAACACAGATAGCGTGGTGATCTTCTCTGGAGAA GGATCAGATGAACTTACGCAGGGTTACATATTTTCACAAGGCTCCTTCTCCTGAAAAAGCCGAGGAGGAGGAGAGT GAGAGGCTTCTGAGGGAACTCTATTTGTTTGATGTTCTCCGCGCAGATCGAACTACTGCTGCCCATGGTCTTGAA CTGAGAGTCCCATTTCTAGATCATCGATTTTCTTCCTATTACTTGTCTCTGCCACCAGAAATGAGAATTCCAAAG AATGGGATAGAAAAACATCTCCTGAGAGAGACGTTTGAGGATTCCAATCTGATACCCAAAGAGATTCTCTGGCGA CCAAAAGAAGCCTTCAGTGATGGAATAACTTCAGTTAAGAATTCCTGGTTTAAGATTTTACAGGAATACGTTGAA CATCAGGTTGATGATGCAATGATGGCAAATGCAGCCCAGAAATTTCCCTTCAATACTCCTAAAAACCAAAGAAGGA TATTACTACCGTCAAGTCTTTGAACGCCATTACCCAGGCCGGGCTGACTGGCTGAGCCATTACTGGATGCCCAAG ${\tt TGGATCAATGCCACTGACCCTTCTGCCCGCACGCTGACCCACTACAAGTCAGCTGTCAAAGCT}{\tt TAGGTCTTT}$ ATGCTGTAATGTGAAAGCAAATATTTCTTCGTGTTGGATGGGGACTGTGGGTAGATAGGGGAACAATGAGAGTCA ACTCAGGCTAACTTGGGTGTGAAAAAAAAAAAAAGTCCTAAATCT

MCGIWALFGSDDCLSVQCLSAMKIAHRGPDAFRFENVNGYTNCCFGFHRLAVVDPLFGMQPIRVKKYPYLWLCYN
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KVADHIGSEHYEVLFNSEEGIQALDEVIFSLETYDITTVRASVGMYLISKYIRKNTDSVVIFSGEGSDELTQGYI
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TFEDSNLIPKEILWRPKEAFSDGITSVKNSWFKILQEYVEHQVDDAMMANAAQKFPFNTPKTKEGYYYRQVFERH
YPGRADWLSHYWMPKWINATDPSARTLTHYKSAVKA

TCGCGGTCCGGGTCCCTGCGGCGGACGGGTCGGATCGTGCTCGTGCCAGGGCGCAGTCAGGTGTCGCGTGGTCC TGATCTAGGAAGAGACTGCGGCCTTATCACCGTCTCGGTGTCTGCTTTCACCTTCAACTGCCCCCCTCCTCACCT GGACCGCTCACCCTCCTCCCCCTCTCACCCCGCCATCCCCACCAGTCCCCACCTGTCTCTGTAGACTGCAAGA CTCATCAAGTGACTTGCTGAGCAAACCCTGCCGAGAAGAGATTTTCTTCAATCACATCTGAATAAATCACTTGAA GAAAGCTTATAGCTTCATTGCACC<u>ATG</u>TGTGGCATTTGGGCGCTGTTTGGCAGTGATGATTGCCTTTCTGTTCAG TGTCTGAGTGCTATGAAGATTGCACACAGAGGTCCAGATGCATTCCGTTTTGAGAATGTCAATGGATACACCAAC TGCTGCTTTGGATTCACCGGTTGGCGGTAGTTGACCCGCTGTTTGGAATGCAGCCAATTCGAGTGAAGAAATAT CCGTATTTGTGGCTCTGTTACAATGGTGAAATCTACAACCATAAGAAGATGCAACAGCATTTTGAATTTGAATAC ${\tt CAGACCAAAGTGGATGGTGAGATAATCCTTCATCTTTATGACAAAGGAGGAATTGAGCAAACAATTTGTATGTTG}$ GATGGTGTTTTGCATTTGTTTTACTGGATACTGCCAATAAGAAAGTGTTCCTGGGTAGAGATACATATGGAGTC AGACCTTTGTTTAAAGCAATGACAGAAGATGGATTTTTGGCTGTATGTTCAGAAGCTAAAGGTCTTGTTACATTG AAGCACTCCGCGACTCCCTTTTTAAAAGTGGAGCCTTTTCTTCCTGGACACTATGAAGTTTTGGATTTAAAGCCA AATGGCAAAGTTGCATCCGTGGAAATGGTTAAATATCATCACTGTCGGGATGAACCCCTGCACGCCCTCTATGAC AATGTGGAGAAACTCTTTCCAGGTTTTGAGATAGAAACTGTGAAGAACAACCTCAGGATCCTTTTTAATAATGCT GTAAAGAAACGTTTGATGACAGACAGAAGGATTGGCTGCCTTTTATCAGGGGGGCTTGGACTCCAGCTTGGTTGCT GCCACTCTGTTGAAGCAGCTGAAAGAGCCCAAGTACAGTATCCTCTCCAGACATTTGCAATTGGCATGGAAGAC AGCCCCGATTTACTGGCTGCTAGAAAGGTGGCAGATCATATTGGAAGTGAACATTATGAAGTCCTTTTTAACTCT GAGGAAGGCATTCAGGCTCTGGATGAAGTCATATTTTCCTTGGAAACTTATGACATTACAACAGTTCGTGCTTCA GTAGGTATGTATTTAATTTCCAAGTATATTCGGAAGAACACAGATAGCGTGGTGATCTTCTCTGGAGAAGGATCA GATGAACTTACGCAGGGTTACATATATTTTCACAAGGCTCCTTCTCCTGAAAAAGCCGAGGAGGAGAGTGAGAGG CTTCTGAGGGAACTCTATTTGTTTGATGTTCTCCGCGCAGATCGAACTACTGCTGCCCATGGTCTTGAACTGAGA GTCCCATTTCTAGATCATCGATTTTCTTCCTATTACTTGTCTCTGCCACCAGAAATGAGAATTCCAAAGAATGGG ATAGAAAAACATCTCCTGAGAGAGACGTTTGAGGATTCCAATCTGATACCCAAAGAGATTCTCTGGCGACCAAAA GAAGCCTTCAGTGATGGAATAACTTCAGTTAAGAATTCCTGGTTTAAGATTTTACAGGAATACGTTGAACATCAG GTTGATGATGCAATGATGGCAAATGCAGCCCAGAAATTTCCCTTCAATACTCCTAAAACCAAAGAAGGATATTAC TACCGTCAAGTCTTTGAACGCCATTACCCAGGCCGGCTGACTGGCTGAGCCATTACTGGATGCCCAAGTGGATC AATGCCACTGACCCTTCTGCCCGCACGCTGACCCACTACAAGTCAGCTGTCAAAGCTTAGGTGGTCTTTATGCTG TAATGTGAAAGCAAATATTTCTTCGTGTTGGATGGGGAACTGTGGGTAGATAGGGGAACAATGAGAGTCAACTCAG ΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑΑ

MCGIWALFGSDDCLSVQCLSAMKIAHRGPDAFRFENVNGYTNCCFGFHRLAVVDPLFGMQPIRVKKYPYLWLCYN GEIYNHKKMQQHFEFEYQTKVDGEIILHLYDKGGIEQTICMLDGVFAFVLLDTANKKVFLGRDTYGVRPLFKAMT EDGFLAVCSEAKGLVTLKHSATPFLKVEPFLPGHYEVLDLKPNGKVASVEMVKYHHCRDEPLHALYDNVEKLFPG FEIETVKNNLRILFNNAVKKRLMTDRRIGCLLSGGLDSSLVAATLLKQLKEAQVQYPLQTFAIGMEDSPDLLAAR KVADHIGSEHYEVLFNSEEGIQALDEVIFSLETYDITTVRASVGMYLISKYIRKNTDSVVIFSGEGSDELTQGYI YFHKAPSPEKAEEESERLLRELYLFDVLRADRTTAAHGLELRVPFLDHRFSSYYLSLPPEMRIPKNGIEKHLLRE TFEDSNLIPKEILWRPKEAFSDGITSVKNSWFKILQEYVEHQVDDAMMANAAQKFPFNTPKTKEGYYYRQVFERH YPGRADWLSHYWMPKWINATDPSARTLTHYKSAVKA

GTTTCCCACGGGTCCTCGCCCTCCTGGAGGCCCTGAGCAGCGACTTCCTGGCCTGTAAAATCTGCCTGGAG CAGCTGCGGGCACCCAAGACACTGCCTGCCTGCATACCTACTGCCAAGACTGCCTGGCACAGCTGGCGGATGGC GGCCGCGTCCGCTGCCCCGAGTGCCGCGAGACAGTGCCTGTGCCGCCCGAGGGTGTGGCCTCCTTCAAGACCAAC TACAGGGCCGGGTGGTATGATGAGGAGGCCCGGGAGCGCCAAGCGGCCCAGTGTCCCCAGCACCCCGGGGAGGCA CTGCGCTTCCTGTGCCAGCCCTGCTCACAGTTGCTGTGCAGAGAGTGCCGCCTAGACCCCCACCTGGACCACCCC TGCCTGCCTCTGGCTGAAGCTGTGCCTGCCCGGAGGCCGGGCCTGGAGGGACTGCTGGCCGGTGTGGACAATAAC GGGACTCAGGTGGAGGAGGCGGCTGAGGGCGTCCTCCGGGCCCTGCTGGCCCAGAAGCAGGAGGTGCTGGGGCAG GCCAGGGCCGCAGCCGCCTTCGCCCGCCGGGTACTCAGCCTGGGGCGAGAGGCCGAGATCCTCTCCCTGGAAGGG $\tt CTGGAGCTCCATCCTGGGCTCCTGGACAAGAACTGCCACCTTCTTCGGCTGTCCTTTGAGGAGCAGCCCCCAG$ ACTGAGAGACAGGGTGGAGTCCAGCCCCAGGCTGGAGATGGAGCCCCAGACCCCAAAAGAGGGAAAAAGCCCAGACA ACCCGAGAAGAGGGAGCCCAGACCTTGGAGGAGGACAGGGCCCAGACACCCCACGAGGATGGAGGACCCCAGCCC GCCCTGGGCCGAATCTGGACGCTCTGGCCTCCTCCCCAGACCCATCTTTTACTGCAGTTTCCCCACGCGGATG CCTGGAGACAAGCGGTCCCCCGGATCACCGGGCTCTGTCCCTTCGGTCCCCGGGAGATCCTGGTGGCGGATGAG CAGAACCGGGCACTGAAACGCTTCTCCCTCAACGGCGACTACAAGGGCACCGTGCCGGTCCCTGAGGGCTGCTCC $\verb|CCTTGCAGCGTGGCCGCCCTGCAGAGCGCGGTGGCCTTCTCCGCTAGCGCACGGCTCTATCTCATCAACCCCAAC| \\$ $\tt CGCGTGGCTGTCAGCGTGGGGGCCACGTGGAGGTGTACAATATGGAAGGCAGCCTGGCCACCCGGTTCATTCCT$ GGAGGCAAGGCCAGCCGGGCCTGCGGGCGCTGTTTTCTGACCACCAGCCCCCAGGGGCATTTCGTGGGGTCG GACTGGCAGCAGAATAGTGTGGTAATCTGTGATGGGCTGGGCCAGGTGGTTGGGGAGTACAAGGGGCCAGGCCTG CATGGCTGCCAGCCGGGCTCCGTGTCTGTGGATAAGAAGGGCTACATCTTTCTGACCCTTCGAGAAGTCAACAAG GTGGTGATCCTGGACCCGAAGGGGTCCCTCCTTGGAGACTTCCTGACAGCCTACCACGGCCTGGAAAAGCCCCGG GTTACCACCATGGTGGATGGCAGGTACCTGGTCGTGTCCCTCAGTAACGGGACCATCCACATCTTTCGGGTCCGT GTCCGTGGGAGGTGGAGGCCGAGGACATTTTCCTGAAGGGCAGGGGTTGGCAACTTTTCAACATGGAGTGCCAAA $\verb|CTGCTAACCCGTCTTCTAGTGTGTGAGAATAGGGACCAAGGTGGTGGCGTGACCTTAACTCTCAGAAGCAGAGGA$ GCTGCTATATAGTTTAGGTTTCTGAGGTTTGTGAGCCTGTCCTGCTTTGCATTCTTCAAAACCATTCCTGATAGA ACCCCGGCCCCCTTGGACTGGCACAGGGTCCTACAGAGTCAGAGGGGCCTGAGATTTCGAATGGGCAGTGAAT GGCCTCTTCTGCCAGCCACAGGCAGGATGCTCCTTGATCACGGCATCCCCCGGCGGTAGTACAGGGTGAGCTTGC AGGAGGGTCTGCAAGTGCAGACAGCAGCTGGGGCCAAAGAGGTGTTAGGTTCAAAGGCTGCGAAGAGAATAGGCT ACTGGAAAACCAAACCCAACAGAATTCACGTCCAAAAATCCACATTCTCCATCGCTTCTCAGCCTTTTGGCTAAG ATTAAGTATTAAAAAAAAAACCAGGCTCTGCCAGGCGCAGTGGCTCATGCCTATAATCCCGGCACTTTGGGAGTCT GTGGCAGGAGGATTGCTTGAGGCCAGGAGTTTGAGACCAGCCTGGGCAACATAGCGAGACCCCATCTCTACAAAA GATTAAAAATTAGCTGCGTGTAGTAGCATATGCCTTTCAACGTAGCTACTCAGGAGGCTGAGGTGGGAGGATCCC TTGAGCCGAGGAGTTTGAGTCTGCAGTGAGCTATGATCGCACCACTGCATTCCAGACCCCATCTCG

MVSHGSSPSLLEALSSDFLACKICLEQLRAPKTLPCLHTYCQDCLAQLADGGRVRCPECRETVPVPPEGVASFKT
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EQNRALKRFSLNGDYKGTVPVPEGCSPCSVAALQSAVAFSASARLYLINPNGEVQWRRALSLSQASHAVAALPSG
DRVAVSVAGHVEVYNMEGSLATRFIPGGKASRGLRALVFLTTSPQGHFVGSDWQQNSVVICDGLGQVVGEYKGPG
LHGCQPGSVSVDKKGYIFLTLREVNKVVILDPKGSLLGDFLTAYHGLEKPRVTTMVDGRYLVVSLSNGTIHIFRV
RSPDS

GAATTCCTGCAGCTCAGCAGCCGCCGCCAGAGCAGGACCGAACCGCCAATCGCAAGGCACCTCTGAGAACTTCAGG ATGCAGATGTCTCCAGCCCTCACCTGCCTAGTCCTGGGCCTGGCCCTTGTCTTTGGTGAAGGGTCTGCTGTGCAC CATCCCCATCCTACGTGGCCCACCTGGCCTCAGACTTCGGGGTGAGGGTGTTTCAGCAGGTGGCGCAGGCCTCC AAGGACCGCAACGTGGTTTTCTCACCCTATGGGGTGGCCTCGGTGTTGGCCATGCTCCAGCTGACAACAGGAGGA CTGTACAAGGAGCTCATGGGGCCATGGAACAAGGATGAGATCAGCACCACAGACGCGATCTTCGTCCAGCGGGAT GGGAAAGGAGCCGTGGACCAGCTGACACGGCTGGTGCTGGTGAATGCCCTCTACTTCAACGGCCAGTGGAAGACT CCCTTCCCCGACTCCAGCACCCACCGCCGCCTCTTCCACAAATCAGACGGCAGCACTGTCTCTGTGCCCATGATG GCTCAGACCAACAAGTTCAACTATACTGAGTTCACCACGCCCGATGGCCATTACTACGACATCCTGGAACTGCCC ATTCTGAGTGCCCAGCTCATCAGCCACTGGAAAGGCAACATGACCAGGCTGCCCCGGCTCCTGGTTCTGCCCAAG TTCTCCCTGGAGACTGAAGTCGACCTCAGGAAGCCCCTAGAGAACCTGGGAATGACCGACATGTTCAGACAGTTT CAGGCTGACTTCACGAGTCTTTCAGACCAAGAGCCTCTCCACGTCGCGCAGGCGCTGCAGAAAGTGAAGATCGAG GTGAACGAGAGTGGCACGGTGGCCTCCTCATCCACAGCTGTCATAGTCTCAGCCCGCATGGCCCCCGAGGAGATC ATCATGGACAGACCCTTCCTCTTTGTGGTCCGGCACAACCCCACAGGAACAGTCCTTTTCATGGGCCAAGTGATG GANAAGAATTTTAGTGTTAATGACTCTTTCTGAAGGAAGAGAAGACATTTGCCTTTTGTTAAAAGATGGTAAACC GGGAGAGAGTTTGAAGCACAACTCCCTTAAGGTCTCCAAACCAGACGGTGACGCCTGCGGGACCATCTGGGGCA $\verb|CCTGCTTCCACCCGTCTCTCTGCCCACTCGGGTCTGCAGACCTGGTTCCCACTGAGGCCCTTTGCAGGATGGAAC| \\$ TACGGGGCTTACAGGAGCTTTTGTGTGCCTGGTAGAAACTATTTCTGTTCCAGTCACATTGCCATCACTCTTGTA AACTCTCCTGGCCTGGCCATCTCCCTCCCCAGAAACAGTGTGCATGGGTTATTTTGGAGTGTAGGTGACTTGTTT ACTCATTGAAGCAGATTTCTGCTTCCTTTTATTTTATAGGAATAGAGGAAGAAATGTCAGATGCGTGCCCAGCT CTTCACCCCCAATCTCTTGGTGGGGAGGGTGTACCTAAATATTTATCATATCCTTGCCCTTGAGTGCTTGTTA GAGAGAAAGAGAACTACTAAGGAAAATAATATTATTTAAACTCGCTCCTAGTGTTTCTTTGTGGTCTGTGTCACC GTATCTCAGGAAGTCCAGCCACTTGACTGGCACACCCCCTCCGGACATCCAGCGTGACGGAGCCCACACTGCCA CCTTGTGGCCGCCTGAGACCCTCGCGCCCCCCGCGCCCCCCCGCGCCCCTCTTTTTCCCCTTGATGGAAATTGACC ATACAATTTCATCCTCCTTCAGGGGATCAAAAGGACGGAGTGGGGGGGACAGAGACTCAGATGAGGACAGAGTGGT TTCCAATGTGTTCAATAGATTTAGGAGCAGAAATGCAAGGGGCTGCATGACCTACCAGGACAGAACTTTCCCCAA CACGTGAGGGGGGGGGGGGAGAGAGAGACAGGCAGCTCGGATTCAACTACCTTAGATAATATTTCTGAAAACCTA **AATATATATTTCTAATATCTTTAAATATATATATATATTTTAAAGACCAATTTATGGGAGAATTGCACACAGATG** TGAAATGAATGTAATCTAATAGAAGC

MQMSPALTCLVLGLALVFGEGSAVHHPPSYVAHLASDFGVRVFQQVAQASKDRNVVFSPYGVASVLAMLQLTTGG
ETQQQIQAAMGFKIDDKGMAPALRHLYKELMGPWNKDEISTTDAIFVQRDLKLVQGFMPHFFRLFRSTVKQVDFS
EVERARFIINDWVKTHTKGMISNLLGKGAVDQLTRLVLVNALYFNGQWKTPFPDSSTHRRLFHKSDGSTVSVPMM
AQTNKFNYTEFTTPDGHYYDILELPYHGDTLSMFIAAPYEKEVPLSALTNILSAQLISHWKGNMTRLPRLLVLPK
FSLETEVDLRKPLENLGMTDMFRQFQADFTSLSDQEPLHVAQALQKVKIEVNESGTVASSSTAVIVSARMAPEEI
IMDRPFLFVVRHNPTGTVLFMGQVMEP

MMRFMLLFSRQGKLRLQKWYLATSDKERKKMVRELMQVVLARKPKMCSFLEWRDLKVVYKRYASLYFCCAIEGQD
NELITLELIHRYVELLDKYFGSVCELDIIFNFEKAYFILDEFLMGGDVQDTSTFPFSH

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 ${\tt MMRFMLLFSRQGKLRLQKWYLATSDKERKKMVRELMQVVLARKPKMCSFLEWRDLKVVYKRYASLYFCCAIEGQD} \\ {\tt NELITLELIHRYVELLDKYFGSVCELDIIFNFEKAYFILDEFLMGGDVQDTSKKSVLKAIEQADLLQEEDESPRS} \\ {\tt VLEEMGLA}$

AGACCTCGACCGTCGCTCCTACCCCGGCCACCGCTCGGAGCCGAGGCGGACGCGTCCCGATCTTCCCCTGTCCCC ${\tt ACCCTGCCCCGACCCTCTCCCACCTCTCGCGTCGTGACACCAGCGTCTCCGGCAGCCTCTTGGTC} {\tt ATG} {\tt AAAGC}$ CCTCAGATTGTCGGCTTCCGCCCTCTTCTGCCTTCTGCTGATCAACGGGTTAGGGGCAGCACCCCCTGGTCGCCC TGAGGCGCAGCCTCCTCTCAGCTCTGAGCATAAAGAGCCGGTAGCCGGGGACGCAGTGCCCGGGCCAAAGGA TGGCAGCGCCCCAGAGGTCCGAGGCGCTCGGAATTCCGAGCCGCAGGACGAGGAGAGCTTTTCCAGGGCGTGGA GCAGGGGCCGGAGGAAGAAGCAGCTGAAGCTCTGCTGACCGAGACCGTGCGCAGACCCACAGCCTCCCGGC CGAGGAGCTCGAGGCGCTAGCGTCCCTGCTCCAGGAACTGCGAGATTTCAGTCCAAGTAGCGCCAAGCGCCAGCA GGAGACGGCGGCAGCAGAGACCGGAAACCCGCACGCACACGCTGACCCGAGTGAATCTGGAGAGCCCGGGGCCAGA GCGCGTATGGCGCGCTTCCTGGGGAGAGTTCCAGGCGCGTGTCCCGGAGCGCGCCCCTGCCGCCCCCGGCCCC CTCTCAATTCCAGGCGCGTATGCCCGACAGCGGGCCCCTTCCCGAAACCCACAAGTTCGGGGAAGGAGTGTCCTC CCCCAAAACACACCTAGGCGAGGCATTGGCACCCCTGTCCAAGGCGTACCAAGGCGTGGCCGCCCCGTTCCCCAA GGCGCGCCGGCCGAGAGCGCACTCCTGGGCGGCCGCCTCCGAGGCGGCGAGCGCCTTCTCCAGCAAGGGCTGGCGCA GGGGGAAGAGGATGAGGAGGCGGAGGCGGAGGCAGAGGCGGAGGAGGCGGAGAGGCGCGCAGAACGCGCT CCTGTTCGCGGAGGAGGACGGCGGGAAGCCGGCGCGAGGACAAGCGCTCCCAGGAGGAGACGCCGGGCCACCG CAGCCTCATTGAGCTGTCCACCAAACTCCACCTGCCAGCGGACGACGTGGTCAGCATCATCGAGGAGGTGGAGGA GCCCTGGGATCGGGAGGAGGACGAGGTGTACCCGCCAGGGCCGTACCACCCTTTCCCCAACTACATCCGGCCGCG GACACTGCAGCCGCCCTCGGCCTTGCGCCGCCGCCACTACCACCACCGCCTTGCCGCCCTTCGCGCCACTATCCCGG $\mathsf{GGAGAATTACATCGAGCACGTGCTGCTCCGGCGCCCCG}$ CGCGCGCGCGCCCCCCCCCCTCCGTGTTGCCCGCTCCCCCTCGGTGTTTGCATGCGCCCCGGCCCTGCCCC TTGGCCCTGCCCCTGTCCCCGGGCTGCGTCGGGACCTGCCAGACCCCCTCCCGGGTCCTGAGCCCGAACTCCCA GAGCTCACCCGCGGGTGACCGGGGGCCCAGCCCAGGAGGGCGGGTGGTTTGTGCGAGTTCCCTTGCCACGCGGGGC CCCGGCCCCATCAAGTCCCTCTGGGGACGTCCCCGTCGGAAAACCGGAAAAAGCAGTTCCAGTTAATTGTGTGAAG TGTGTCTGTCTCCAGCCCTTCGGGCCTCCCACGAGCCCTCCCAGCCTCTCCAAGTCGCTGTGAATTGACCCCTTC TTTCCTTTCTCTGTTGTAAATACCCCTCACGGAGGAAATAGTTTTGCTAAGAAATAAAAGTGACTATTTT

MKALRLSASALFCLLLINGLGAAPPGRPEAQPPPLSSEHKEPVAGDAVPGPKDGSAPEVRGARNSEPQDEGELFQ
GVDPRALAAVLLQALDRPASPPAPSGSQQGPEEEAAEALLTETVRSQTHSLPAPESPEPAAPPRPQTPENGPEAS
DPSEELEALASLLQELRDFSPSSAKRQQETAAAETETRTHTLTRVNLESPGPERVWRASWGEFQARVPERAPLPP
PAPSQFQARMPDSGPLPETHKFGEGVSSPKTHLGEALAPLSKAYQGVAAPFPKARRPESALLGGSEAGERLLQQG
LAQVEAGRRQAEATRQAAAQEERLADLASDLLLQYLLQGGARQRGLGGRGLQEAAEERESAREEEEAEQERRGGE
ERVGEEDEEAAEAEAEAEAEAEAEARARQNALLFAEEEDGEAGAEDKRSQEETPGHRRKEAEGTEEGGEEEDDEEMDPQ
TIDSLIELSTKLHLPADDVVSIIEEVEEKRKRKKNAPPEPVPPPRAAPAPTHVRSPQPPPPAPAPARDELPDWNE
VLPPWDREEDEVYPPGPYHPFPNYIRPRTLQPPSALRRRHYHHALPPSRHYPGREAQARRAQEEAEAEERRLQEQ

GCCGCCCCCCCCCCCCCCCGTGCGCCCCGGGACAATCCTCGCCTTGTCTGTGGCGCCGGCATCTGGAGCTTTCT GTAGCCTCCGGATACGCCTTTTTTTCAGGGCGTAGCCCCAGCCAAGCTGCTCCCCGCGGCGGCCGCACAGCAGCC CGAGCGCCCCTTTCCGGAGCTCCCCTCCGGAGCTGGGATCCAGGCGCGTAGCGGAGATCCCAGGATCCTGGGTG CTGTCTGGGCCCGCTCCCACCATGACCTCCTCGGGGCCTGGACCCCGGTTCCTGCTGCTGCTGCCGCTGCTGCT GCCCCTGCGGCCTCAGCCTCCGACCGGCCCCGGGGCCGAGACCCGGTCAACCCAGAGAAGCTGCTGGTGATCAC TGTGGCCACAGCTGAAACCGAGGGGTACCTGCGTTTCCTGCGCTCTGCGGAGTTCTTCAACTACACTGTGCGGAC CCTGGGCCTGGGAGAGGAGTGGCGAGGGGGTGATGTGGCTCGAACAGTTGGTGGAGGACAGAAGGTCCGGTGGTT AAAGAAGGAAATGGAGAAATACGCTGACCGGGAGGATATGATCATCATGTTTGTGGATAGCTACGACGTGATTCT GGCCGGCAGCCCCACAGAGCTGCTGAAGAAGTTCGTCCAGAGTGGCAGCCGCCTGCTCTTCTCTGCAGAGAGCTT CTGCTGGCCCGAGTGGGGGCTGGCGGAGCAGTACCCTGAGGTGGGCACGGGGAAGCGCTTCCTCAATTCTGGTGG ATTCATCGGTTTTGCCACCACCATCCACCAAATCGTGCGCCAGTGGAAGTACAAGGATGATGACGACCAGCT GTTCTACACACGGCTCTACCTGGACCCAGGACTGAGGGAGAAACTCAGCCTTAATCTGGATCATAAGTCTCGGAT CTTTCAGAACCTCAACGGGGCTTTAGATGAAGTGGTTTTAAAGTTTGATCGGAACCGTGTGCGTATCCGGAACGT GGCCTACGACACGCTCCCCATTGTGGTCCATGGAAACGGTCCCACTAAGCTGCAGCTCAACTACCTGGGAAACTA CGTCCCCAATGGCTGGACTCCTGAGGGAGGCTGTGGCTTCTGCAACCAGGACCGGAGGACACTCCCGGGGGGGCCA GCCTCCCCCCGGGTGTTTCTGGCCGTGTTTGTGGAACAGCCTACTCCGTTTCTGCCCCGCTTCCTGCAGCGGCT GCTACTCCTGGACTATCCCCCCGACAGGGTCACCCTTTTCCTGCACAACAACGAGGTCTTCCATGAACCCCACAT CGCTGACTCCTGGCCGCAGCTCCAGGACCACTTCTCAGCTGTGAAGCTCGTGGGGCCGGAGGAGGCTCTGAGCCC AGGCGAGGCCAGGGACATGGCCATGGACCTGTGTCGGCAGGACCCCGAGTGTGAGTTCTACTTCAGCCTGGACGC CGACGCTGTCCTCACCAACCTGCAGACCCTGCGTATCCTCATTGAGGAGAACAGGAAGGTGATCGCCCCCATGCT GTCCCGCCACGGCAAGCTGTGGTCCAACTTCTGGGGCGCCCTGAGCCCCGATGAGTACTACGCCCGCTCCGAGGA CTACGTGGAGCTGGTGCAGCGGAAGCGAGTGGGTGTGTGGAATGTACCATACATCTCCCAGGCCTATGTGATCCG GGGTGATACCCTGCGGATGGAGCTGCCCCAGAGGGATGTGTTCTCGGGCAGTGACACAGACCCGGACATGGCCTT CTGTAAGAGCTTTCGAGACAAGGGCATCTTCCTCCATCTGAGCAATCAGCATGAATTTGGCCGGCTCCTGGCCAC TTCCAGATACGACACGGAGCACCTGCACCCCGACCTCTGGCAGATCTTCGACAACCCCGTCGACTGGAAGGAGCA GTTCCCACTGCTGTCAGAACAAATGTGTGATGAGCTGGTGGCAGAGATGGAGCACTACGGCCAGTGGTCAGGCGG CCGCCATGAGGATTCAAGGCTGGCTGGAGGCTACGAGAATGTGCCCACCGTGGACATCCACATGAAGCAGGTGGG GTACGAGGACCAGTGCTGCAGCTGCTGCGGACGTATGTGGGCCCCATGACCGAGAGCCTGTTTCCCGGTTACCA CACCAAGGCGCGGCGGTGATGAACTTTGTGGTTCGCTACCGGCCAGACGAGCAGCCGTCTCTGCGGCCACACCA CCTGCGCTACGACTGTGTGATCTCCTCCCCGAGGAAGGGCTGGGCACTCCTGCACCCCGGCCGCCTCACCCACTA $\tt CCACGAGGGGCTGCCAACGACTGGGGCACACGCTACATCATGGTGTCCTTTGTCGACCCC\underline{TGA}CACTCAACCAC$ TCTGCCAAACCTGCCCTTGTGCCTTTTTAGGGGGCCTGGCCCCCGTCCTGGGAGTTGGGGGATGGGTCTC TCTGTCTCCCCACTTCCTGAGTTCATGTTCCGCGTGCCTGAACTGAATATGTCACCTTGCTCCCAAGACACGGCC CTCTCAGGAAGCTCCCGGAGTCCCCGCCTCTCTCCCCCCCACAGGGGTTCGTGGGCACAGGGCTTCTGGGGAC AA

MTSSGPGPRFLLLLPLLPPAASASDRPRGRDPVNPEKLLVITVATAETEGYLRFLRSAEFFNYTVRTLGLGEEW RGGDVARTVGGGQKVRWLKKEMEKYADREDMIIMFVDSYDVILAGSPTELLKKFVQSGSRLLFSAESFCWPEWGL AEQYPEVGTGKRFLNSGGFIGFATTIHQIVRQWKYKDDDDQLFYTRLYLDPGLREKLSLNLDHKSRIFQNLNGA LDEVVLKFDRNRVRIRNVAYDTLPIVVHGNGPTKLQLNYLGNYVPNGWTPEGGCGFCNQDRRTLPGGQPPPRVFL AVFVEQPTPFLPRFLQRLLLLDYPPDRVTLFLHNNEVFHEPHIADSWPQLQDHFSAVKLVGPEEALSPGEARDMA MDLCRQDPECEFYFSLDADAVLTNLQTLRILIEENRKVIAPMLSRHGKLWSNFWGALSPDEYYARSEDYVELVQR KRVGVWNVPYISQAYVIRGDTLRMELPQRDVFSGSDTDPDMAFCKSFRDKGIFLHLSNQHEFGRLLATSRYDTEH LHPDLWQIFDNPVDWKEQYIHENYSRALEGEGIVEQPCPDVYWFPLLSEQMCDELVAEMEHYGQWSGGRHEDSRL AGGYENVPTVDIHMKQVGYEDQWLQLLRTYVGPMTESLFPGYHTKARAVMNFVVRYRPDEQPSLRPHHDSSTFTL NVALNHKGLDYEGGGCRFLRYDCVISSPRKGWALLHPGRLTHYHEGLPTTWGTRYIMVSFVDP

 ${\tt MVEKKTSVRSQDPGQRRVLDRAARQRRINRQLEALENDNFQDDPHAGLPQLGKRLPQFDDDADTGKKKKKTRGDHFLRFRKNFQALLEEQNLSVAEGPNYLTACAGPPSRPQRPFCAVCGFPSPYTCVSCGARYCTVRCLGTHQETRCLKWTV$

 ${\tt ATATACTTGCGCCGCCGCCGCCCGCTCGCTTGTGAAACTGGAAGGCTGCC} \underline{{\tt ATG}}{\tt GCTAGCCCAGCCGCCTCCTCG}$ GTGCGACCACCGAGGCCCAAGAAGAGCCGCAGACGCTCGTCATCCCCAAGAATGCGGCGGAGGAGCAGAAGCTC AAGCTGGAGCGGCTCATGAAGAACCCGGACAAAGCAGTTCCAATTCCAGAGAAAATGAGTGAATGGGCACCTCGA CCTCCCCAGAATTTGTCCGAGATGTCATGGGTTCAAGTGCTGGGGCCGGCAGTGGAGAGTTCCACGTGTACAGA CATCTGCGCCGGAGAGAATATCAGCGACAGGACTACATGGATGCCATGGCTGAGAAGCAAAAATTGGATGCAGAG TTTCAGAAAAGACTGGAAAAGAATAAAATTGCTGCAGAGGAGCAGACCGCAAAGCGCCGGAAGAAGCGCCAGAAG TTAAAAGAGAAGAATTACTGGCAAAGAAGATGAAACTTGAACAGAAGAACAAGAAGGACCCGGTCAGCCCAAG GAGCAGGGGTCCAGCAGCTCTGCGGAGGCATCTGGAACAGAGGAGGAGGAGGAAGTGCCCAGTTTCACCATGGGG $\texttt{CGA} \underline{\textbf{TGA}} \texttt{CAATGTTTGCCACAGCCTCTGCCTGGAACCTGGCTCGTGTCACCAGAAGGGAAAGGCGGCTGTTTG}$ TCCTGTATTTGGCAGGTTTGGGAGCCTGAGGGGCCATCTCCCTGACACTCAGAGGCACTGCCTTGCAGACACCAT CCGTGCTCCTGGTAAAGGGGGACAGAGACCTCACCTTGCCACATATTTGAACAGTGATGAGTTTGGGGCTGGTT TCTGGGAAGGGAACGTTTATTTAGTAAAGAGCAGAACACCCTTGCGTTTTGTTGGGACATGTGGACCGTGAGTCG CAAACACTCTGGAGAAGGCTGAGATGCCACCATTCCCACGGGGACTGAAGACACATTACGTGGACCTGGTCCCAG GCCATAGAGGGTCTGCTCCCACTGCAGCTCCCGGTGCTCTCGTGTTCTGGGAAGGCCTGGGTGTGCACAAGGA GGCCCGGGCCAGGGACTTCACCAGGGGCTGGGTCACAAGGGCACAGGGTGTGTGGAAAGCGCTGTGGGGGAAGAG GGACGGGGGTTCTCTCACCAACAGCTGTGATTTCATCCCGAAGTGGAAGGGGGTCTAAACAGAACAGGCTGAGAG AGGCGGGACTGGGTCAAGTGGGTGGAGCTCCTCCTTGCATGACTGCAACTGTCGGGGGCTTTCCGCCGGCTCACAG CAGTTGGGGCCAGCGGGAGAAGAGAGGCGGAACTGCTGTGTCCTCACGTGGCGCAGCCTCAAACTGGCATCCAG GCTACTCGGAAGGCCAAGGCAGGAGGACCGCTTGAGTCCAGGGATTCAAGGCCAACCTGGGCAATAGAGCGAGAC CCTGTCTCTTAAAAAACGATGATGATGAACACAGAGGACGGGGCACTGTGCTGGGAGCCAGGGGGCCTGGGAGGA GCCGAGACCAGCCTTTTACCTCGGGGTTTTGAGGCCAACAGGGACGACAGAGACAGTTTCTAGTTAGAGCCTTGG CTCCATTTTTGGATGATTTAGCCCCGAGTTCCTGAGTCTATTTTATGCCCCTTACGTACTTTGATAGAACTAAGG AAATAGTGGTTTTGAGTGAAGGGAAAGGAAACCCAGAAACATTTTACGTTGCTTTTACTTCTGTAGTGTAGATTG $\tt CCCCGGCCCCTCTCTGAGCCCTGTAGCATCTGTGATAGCTTCTGTCCCTTCATCGGTTCATGTCACAGGGATTTT$ CTTTCCCAGGAAGCGGACACGGAGAGTCAGCCCTAATAAATGAGCACATGCCCTGGCTGTACATTTTGAAACCTG

MASPAASSVRPPRPKKEPQTLVIPKNAAEEQKLKLERLMKNPDKAVPIPEKMSEWAPRPPPEFVRDVMGSSAGAG SGEFHVYRHLRRREYQRQDYMDAMAEKQKLDAEFQKRLEKNKIAAEEQTAKRRKKRQKLKEKKLLAKKMKLEQKK QEGPGQPKEQGSSSSAEASGTEEEEEVPSFTMGR

ACGTGCCTATCGACCCCTCTGCTCCTGCCCTGAGCCCGGCCATAAGGGCATGGATTACCGGGACTGGGTCC GCCGCAGCTACCTGGAACTGGTCACCTCTAACCACCACTCGGTACAGGCCCTGTCGTGGCGGAAGCTCTACCTGA GCAGGGCCAAGCTGAAGGCCTCCAGCAGGACCTCCGCCCTCCTCTCCGGCTTTGCCATGGTGGCCATGGTGGAGG TGCAGCTGGAGACGCAGTACCAGTACCCGCGGCCGCTGCTGATTGCCTTCAGCGCCTGCACCACGGTGCTGGTGG CCGTGCACCTGTTCGCCCTCCTCATCAGCACCTGCATCCTGCCCAATGTGGAGGCCGTGAGCAACATCCACAACC TGAACTCCATCAGCGAGTCCCCGCATGAGCGCATGCACCCCTACATCGAGCTGGCCTGGGGCTTCTCCACCGTGC TTGGCATCCTACTCTTCCTGGCCGAGGTGGTGCTGCTGCTGGATCAAGTTCCTCCCCGTGGATGCCCGGCGCCC AGCCTGGCCCCCACCTGGCCCTGGGAGTCACACGGGCTGGCAGGCCGCCCTGGTGTCCACCATCATCATGGTGC ACCGCGAGATCGAGGAGCTCCACAAGCTCAAGGTCCAGCTGGACGGCCATGAGCGCAGCCTGCAGGTCTTGTGAG GGGCCGAGGGCCGGGGCTGGGAGCGGCCCTGTGCCCGGGAGTCCGCAGAGGCGGGGATTTGTCAGATGCAGACAT TTTGCAAGGCTGCCGGGTAGTTCAAGACCAAAGTTTTCCTCTTGTCTTAATACCATAAGGACTGGATGACTTCTC CTGAGATAGAACCGTTTGGTTCAATGAGGGACTGTGTTGCTAAGAGCGTTGGGGGGCAAAGCCAGGCTGGTTCCTT GGCCTCGGGGTTTCCTGGGTCGGGGACACGGTGAAGAGGCTCCAGCGGGACCTGCCCATCAGTCCTGGGCCAGGA AGGGCAGGGTTTTGCGTTCAGAGAAGGATTGCCCCAGAGACCCGTGGTGGACTTCATGGGTGCTGAGTGGCCCGT GTGACAGTGATGACACGAAGGCTTCGGCGTTTGAGTGGGTGCAGGTGCACGCCAGGGCTTGGTGCTTCCCTGCCT GGCCCTGGAGGGAGCTGGGTGGCCTGGCTTCAGGGGAAGACAGGAGCCAGGACACACGTCAGCCCAGCAGGTGTG GGGGGTGCTGCAGCCCTCGGCAGTGGGGTCAGGCCCTGGGGGATGTTTCCAATGGTGGGCAGCCTGGCCAGGCCG GAGAAGACATGTTCACGGGCATCTATCAGATGCCCCCTTGAGGAGGCTGAGTTATTTGAGGGCTGCTGCAAAGTA CGCTAGGCTCAAATTCTCTTTTCCCAGCCAGAGCCCTGGCCACACGGACTCAGAGGGGCCACCGGGGTGGGGAAA GGACCCCTCCCCACCCCCGCAGCCACTGGCCTCCAGCTCTCGGCCACAGAATGGCCTCTAAGGCTGACTCAGC CACTCCCTTGGGCTGTGGCAGCAGGAGGCGGGGGCTCTGGCTCAGGCCCCGGAGCCTGTGCAGCTTGCCCATGGC CCTAGGCAGCGAGGGGACAGCCTGGGGGACTTCCTGCCTAGGCAAGGTCATTGGCCGGGCCTGGCCTGTGGATAG TGGGGCCAGGGCCAGGCCAAATGAGTGCCCTCCTTGTTATGACACCAAGTGACTACAAGGGAGGCAAGA TTTCCTTGAAGGCATCTGGTAGACCCGAAGCCACGCTCTCGGGCCGCACATGCACGCCGCAGCACCAGCTGCCCT GAGCTGCTTGTACAACCAAACACCTTTCCCCTCTTCTCCAGCTGTAACCTGGAGAGTCAGCCATGCCTTGTCTTT TGTTCTCATAAATAGTCACTGGGGCCGGGCGCAGTGACTCACGCCTGTAATCCCAGCACTTTGGGAGGCCTAGGT GGGCGGATCACTTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTCTACTAAAAAAAT ACAGAAAATTAGCTGGGCGTGGTGGCGGGCGCCTGTAGCCCCAGCTACTTGGGAGGCTGAGGCGGGAGAATGGCA ATGGCGTGAACCCGGGAGGCAGAGCTTGCAGTGAGCTGAGATGGCGCCACTGCACTCCAGCCTGGGCGACAGAGC CAGACTCCATCTC

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2584/6881 FIGURE 2376

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2585/6881 FIGURE 2377

 ${\tt MNAPPAFESFLLFEGEKITINKDTKVPNACLFTINKEDHTLGNIIKSRACFPFAFCRDCQFPEASPATLPVQPAELCPRAHQLCAPALKRHLGGEAHPVHLHAGAASRPVQQPQHL}$

CCATTGTGCTCTAAAGGGAAGGTGCTGTGTAATCATTAAGGAGCGGAGGCTTTTGGAGCTGCTAAA<u>ATG</u>CCGGAT TACCTCGGTGCCGATCAGCGGAAGACCAAAGAGGATGAGAAGGACGACAAGCCCATCCGAGCTCTGGATGAGGGG CAACTTCTCAAGAAAATTAATGAGCTCACTGGTATTAAAGAATCTGACACTGGCCTGGCCCCACCAGCACTCTGG GATTTGGCTGCAGATAAGCAGACACTCCAGAGTGAACAGCCTTTACAGGTTGCCAGGTGTACAAAGATAATCAAT GCTGATTCGGAGGACCCAAAATACATTATCAACGTAAAGCAGTTTGCCAAGTTTGTGGTGGACCTTAGTGATCAG CCTCCTAAGATTGACCCAACAGTTACCATGATGCAGGTGGAAGAGAAACCTGATGTCACATACAGTGATGTTGGT GGCTGTAAGGAACAGATTGAGAAACTGCGAGAAGTAGTTGAAACCCCATTACTTCATCCAGAGAGGTTTGTGAAC CTTGGCATTGAGCCTCCCAAGGGCGTGCTCTTTGGTCCACCCGGTACAGGCAAGACACTCTGTGCGCGGGCA GTTGCTAATCGGACTGATGCGTGCTTCATTCGAGTTATTGGATCTGAGCTTGTACAGAAATACGTCGGTGAGGGG GCTATTGGAGGGGCTCGTTTTGATGATGGTGCTGGAGGTGACAATGAAGTGCAGAGAACAATGTTGGAACTGATC AATCAGCTTGATGGTTTTGATCCTCGAGGCAATATTAAAGTGCTGATGGCCACTAACAGACCTGATACTTTGGAT CCAGCACTGATGAGGCCAGGGAGATTGGATAGAAAAATTGAATTTAGCTTGCCCGATCTAGAGGGTCGGACCCAC ATATTTAAGATTCACGCTCGTTCAATGAGTGTTGAAAGAGATATCAGATTTGAACTGTTAGCACGACTGTGTCCA AATAGCACTGGTGCTGAGATTAGAAGCGTCTGCACAGAGGCTGGTATGTTTGCCATCAGAGCACGGCGAAAAATT GCTACCGAGAAGGATTTCTTGGAAGCTGTAAATAAGGTCATTAAGTCTTATGCCAAATTCAGTGCTACTCCTCGT $\texttt{TACATGACATACAAC} \underline{\textbf{TGA}} \textbf{ACCCTGAAGGCTTTCAAGTGAAAACTTTAAATTGGAATCCTAACCTTATATAGACTT}$ GTTAATAACCAATTCATAAACAAATAAATGGCTTCAACTTTAGAGCACAATGG

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MPDYLGADQRKTKEDEKDDKPIRALDEGDIALLKTYGQSTYSRQIKQVEDDIQQLLKKINELTGIKESDTGLAPP ALWDLAADKQTLQSEQPLQVARCTKIINADSEDPKYIINVKQFAKFVVDLSDQVAPTDIEEGMRVGVDRNKYQIH IPLPPKIDPTVTMMQVEEKPDVTYSDVGGCKEQIEKLREVVETPLLHPERFVNLGIEPPKGVLLFGPPGTGKTLC ARAVANRTDACFIRVIGSELVQKYVGEGARMVRELFEMARTKKACLIFFDEIDAIGGARFDDGAGGDNEVQRTML ELINQLDGFDPRGNIKVLMATNRPDTLDPALMRPGRLDRKIEFSLPDLEGRTHIFKIHARSMSVERDIRFELLAR LCPNSTGAEIRSVCTEAGMFAIRARRKIATEKDFLEAVNKVIKSYAKFSATPRYMTYN

WO 2004/030615 PCT/US2003/028547

2588/6881 FIGURE 2380

TGATGAAACGGATGACCTGGAAGGAGATGTTTCTACAACTTGGCACAGTAACGATGACGATGTGTACAGGGCGCC TCCAATTGACCGTTCCATCCTTCCCACTGCTCCACGGGCTGCTCGGGAGAGACACCCAAGCTGGCAAAGTGAAGA AACTCAGGAACGGGAACGGTCGAGGACAGGAAGTGAGTCATCACAGACTGGGACCTCCACCACATCTGGCAGAAA TGCATGAAGGAGAGAGTGAGAAGTCTCTAGAAAATGAAACACTCAATAAGGAGGAAGATTGCCACTCTCCAAC TTCTAAACCTCCCAAACCTGATCAGCCCCTAAAGGTAATGCCAGCCCCTCCACCAAAGGAGAATGCTTGGGTGAA GCGAAGTTCTAACCCTCCTGCTCGATCTCAGAGCTCAGACACAGAGCAGCAATCCCCTACAAGTGGTGGGGGAAA AAAAGGCCAAACTGGGAACTCTAGCCGTGGTCCAGGAGACTGAGGGAACAGAGACCACTGGAAGGAGTCAGATAG GAAAGATGGCAAAAAGGATCAAGACTCCAGATCTGCACCTGAGCCAAAGAAACCTGAGGAAAATCCAGCTTCCAA GTTCAGTTCTGCAAGCAAGTATGCTGCTCTCTCTGTTGATGGTGAAGATGAAAATGAGGGAGAAGATTATGCCAA ATAGACCTCTACATCCTGTGCTTTTCTCCTAGTTTCTCCCACCCTGGAACATTCGAGAGCAAATCAAAACCTCT TTATTTTGCATGCTGCTGCAGCCTTTAAAGTATTGAAGTAACTGGAGAATTGCCAATACAGCCAGAGAGAAAAGGG ACTACAGCTTTTTAGAGAAGTTGTGGTGCGTTATGTCACCATGCAGTTGCCAGTGTGATTAGTGCCTAGGGGTCT GAAAAGTGTGAGATTTCTACCTTTTAGTTTTTTCCTATTGTGGCATATATGAATTCTCAAACATTATCTGAATA AATTTTCCATTCTTGGAAAGGTAGATTTAGCCTCAAGTTGTTTTAGTCTCCAGGAGGCTGCCAGCCCCTCCTCTT GAAGCTTTTGGGAATTGATGAGTCATTTTGCACCAGGTAATAGGGGAAAATTGTGTGACCTCCAGCAAACACATG AATGGTTATTTCCTGGAGCCGGAAGCACTTGGGGGTCGTGGTAATTCCCAATGTTTTCTGTGTCCTAGTTTTACC CTTTCTAAACACTGTCCTTTTTGAAAGTTTGAATATATCCACATTCTATTGAAACCTTGAAACTAAAAATTTAGA TCTTGGGCATTTTCTCTCTCAGCCATGGAGAACTCTGAAAGGAAGAATCGCTGCTTTTCTCAAGCAAATCGGTTT CTTGATATCTTCTGGTTCTCACTCCTTGCCTGCTCCTGATGCTTTGACCCCTTTTATTGATCAGAGTGCTCTAGA ATAATGGATGGTCTTGGATGGTGGATAAATAGGGACAGGGACAGTTAAATTGGGAGCCTTTCTTACAACCTTGAT ACCAATGTGTTTTGTTTTTTTTTTTTTTAAGCTTCCCTTGAGAGAATAAACGGAAATGGAGAACTATTT TTGGTAGACAGTATTAGCAGAGAAACACCTTGATCTTGGTTTGCAAACCCTTCTGCCATCAGTCCTAGATTAGGC CCTGTTCAGCCATGCAGGGGTGTTGGTTTATGCGTGCTGCAGCAGTGGGCATAATGAATATAATTTACCCAGTGG ACANAGGTGTGTACCAAGTGAATTTAAATAATTGGTGTGGATTGGCCAGTAGCTAAGAAGTGGGCTTTTAAAGAG TAGGGTTTGCCCTCTTCATGTCTACTCTCCTTCCAAATAGTTATATCCAAAACTGTTTTTCCCTGTCCCCTACCT TGTCCCCCCATTAAAATAGAAACAGGGATTGATTAATGTCCCGCTCCTGAATACATGTAAAATTTGTACAAAAA TATCTTCTATGAAAATGATTTGTAATCTGTAGACTTATTACCTGGGAGATGTCTTGATGTAAAATCCCATCCTTT GGGTTGTGGGTTTTTTGTTTTCTCCAAATAAATCTGATCTTTAAAGTTC

MAASAKKKNKKGKTISLTDFLAEDGGTGGGSTYVSKPVSWADETDDLEGDVSTTWHSNDDDVYRAPPIDRSILPT
APRAAREPNIDRSRLPKSPPYTAFLGNLPYDVTEESIKEFFRGLNISAVRLPREPSNPERLKGFGYAEFEDLDSL
LSALSLNEESLGNRRIRVDVADQAQDKDRDDRSFGRDRNRDSDKTDTDWRARPATDSFDDYPPRRGDDSFGDSYD
SRIGSGRRAFGSGYRRDDDYRGGGDRYEDRYDRRDDRSWSSRDDYSRDDYRRDDRGPPQRPKLNLKPRSTPKEDD
SSASTSQSTRAASIFGGAKPVDTAAREREVEERLQKEQEKLQRQLDEPKLERRPRERHPSWRSEETQERERSRTG
SESSQTGTSTTSSRNARRRESEKSLENETLNKEEDCHSPTSKPPKPDQPLKVMPAPPPKENAWVKRSSNPPARSQ
SSDTEQQSPTSGGGKVAPAQPSEEGPGRKDENKVDGMNAPKGQTGNSSRGPGDGGNRDHWKESDRKDGKKDQDSR
SAPEPKKPEENPASKFSSASKYAALSVDGEDENEGEDYAE

GTAGCGGGAGCGGAGCCCCGGAGAGCCGCAGAGAACCCTGAGCAGCCCCGCCGCCGCCGCCTAG TTACCGTCATACCACGGGAGGAGCCGCAGCTGCCGCAGCCCGGCCCCAGTCTCCATCACCGCAACCAATGAGCAGC ATCGGCGGCGCCTGCCAGCGTGGACAAGAAGGTCATCGCAGTGAAGGTTTTGGGAACAGTAAAATGGTTCAATGT AAGGAACGGATATGGTTTCATCAACAGGAATGACACCAAGGAAGATGTATTTGTACACCAGACTGCCATAAAGAA TAACCCCAGGAAGTACCTTCGCAGTGTAGGAGATGAAGAGACTGTGGAGTTTGATGTTGTTGAAGGAGAAGAGGG TGCGGAGGCAGCAAATGTTACAGATCCTGGTGGTGTTCGAGTTCAAGGCGGTAAATATGCAGCAGATCGTAACCA TTATAGACGCTATCCACGTCATAGGGGTCCTCCACGCAATTACCAGCAAAATTACCAGAACAGTGAGAGTGGGGA AAAGACCGAGGGATCGGAGAATGCTCCCGAAGGCCAGGCCCAACAATGCCGGCCCTACCGCAGGCAAAGGTTCCC GGGTGCTGACAACCAGGGTGCAGGAGAACAAGGTAGACCAGTGAGGCAGAATATGTATCGGGGGATATAGACCACG ATTCCGCAGGGGCCCTCCTTGCCAAAGACAGCCTAGAGAGTACGGCAATGAAGAAGATAAAATCAAGGAGATGAG ACCCAGGGTCAGCAGCCACCTCAACGTCGGTACCGCAGCAACTTCAATTACCAACGCAGATGCCCAGAAAACCCT AAATCACAAGATGGCAAAGAGACAAAATCAGCCAATCCACCAGCTGAGAATTCGTCTGCTCCCGAGGCTGAGCAG GGCGGGGCTGAGTAAATGCCGGCTTACCATCTCTACCATCATCCGGTTTAGTCATCCAACAAGAAGAAATATGAA AAATAGAACTATCTGCATTATCTATGCAGCATGGGGTTTTTATTATTTTTTACCTAAATATGTCTCTTTTTGGTAA TAACAAACGTGTTTTTTTTAAAAAGCCTTGTTTTTCTCAATACGCCTTTAAAGG

 ${\tt MRRPYGCRPQYSSPPVQGEVMEGADNQGAGEQGRPVRQNMYRGYRPRFRRGPPCQRQPREYGNEEDKIKEMRPRVShlnvgtaatsitnadaqktlnhkmakrqnqpihqlrirllprlsraglskcrltistiirfshptrrnmkfqq}$

2593/6881 FIGURE 2385A

GACCGGGACCTCACCCGGTCCTCGCAGAGTTGCGGCCGCCCCCTTCAGCCCCGGCTCTCCGTATGCGCATGA GCAGAGGCGCCTCCCTCTGTTCCTCCCAAGGCTAAACTTTCTAATTCCCTTCTTTGGGCTCGGGGGCTCCCGGAG CCTCTGCCGCGTCCCCGTGGCTGCAGGGAGCCGGCATGGGGCTTCTCCAGTTGCTAGCTTTCAGTTTCTTAGCCC TGTGCAGAGCCCGAGTGCGCGCTCAGGAACCCGAGTTCAGCTACGGCTGCGCAGAAGGCAGCTGCTATCCCGCCA CGGGCGACCTTCTCATCGGCCGAGCACAGAAAGCTTTCGGTGACCTCGACGTGCGGGCTGCACAAGCCCGAACCC TACTGTATCGTCAGCCACTTGCAGGAGGACAAAAAATGCTTCATATGCAATTCCCAAGATCCTTATCATGAGACC CTGAATCCTGACAGCCATCTCATTGAAAATGTGGTCACTACATTTGCTCCAAACCGCCTTAAGATTTGGTGGCAA TCTGAAAATGGTGTGGAAAATGTAACTATCCAACTGGATTTGGAAGCAGAATTCCATTTTACTCATCATAATG ACTTTCAAGACATTCCGTCCAGCTGCTATGCTGATAGAACGATCGTCCGACTTTGGGAAAACCTGGGGTGTGTAT AGATACTTCGCCTATGACTGTGAGGCCTCGTTTCCAGGCATTTCAACTGGCCCCCATGAAAAAAGTCGATGACATA ATTTGTGATTCTCGATATTCTGACATTGAACCCTCAACTGAAGGAGAGGTGATATTTCGTGCTTTAGATCCTGCT TTCAAAATAGAAGATCCTTATAGCCCAAGGATACAGAATTTATTAAAAATTACCAACTTGAGAATCAAGTTTGTG AAACTGCATACTTTGGGAGATAACCTTCTGGATTCCAGGATGGAAATCAGAGAAAAGTATTATTATGCAGTTTAT GAAGTGGAAGGAATGGTTCACGGACACTGCATGTGCAGGCATAACACCAAGGGCTTAAACTGTGAACTCTGCATG GATTTCTACCATGATTTACCTTGGAGACCTGCTGAAGGCCGAAACAGCAACGCCTGTAAAAAATGTAACTGCAAT GAACATTCCATCTTGTCACTTTGACATGGCTGTTTACCTGGCCACGGGGAACGTCAGCGGAGGCGTGTGTGAT GACTGTCAGCACAACACCATGGGGCGCAACTGTGAGCAGTGCAAGCCGTTTTACTACCAGCACCCAGAGAGGGAC ATCCGAGATCCTAATTTCTGTGAACGTATGTACGTGTGACCCAGCTGGCTCTCAAAATGAGGGAATTTGTGACAG CTATACTGATTTTCTACTGGTCTCATTGCTGGCCAGTGTCGGTGTAAATTAAATGTGGAAGGAGAACATTGTGA TGTTTGCAAAGAAGGCTTCTATGATTTAAGCAGTGAAGATCCATTTGGTTGTAAATCTTGTGCTTGCAATCCTCT GGGAACAATTCCTGGAGGGAATCCTTGTGATTCCGAGACAGGTCACTGCTACTGCAAGCGTCTGGTGACAGGACA CCTTGGGGGAGCCTTAAACAACAGTTGCTTTGCGGAGTCAGGCCAGTGCTCATGCCGGCCTCACATGATTGGACG TCAGTGCAACGAAGTGGAACCTGGTTACTACTTTGCCACCCTGGATCACTACCTCTATGAAGCGGAGGAAGCCAA CTTGGGGCCTGGGGTTAGCATAGTGGAGCGGCAATATATCCAGGACCGGATTCCCTCCTGGACTGGAGCCGGCTT CGTCCGAGTGCCTGAAGGGGCTTATTTGGAGTTTTTCATTGACAACATACCATATTCCATGGAGTACGACATCCT AATTCGCTACGAGCCACAGCTACCCGACCACTGGGAAAAAGCTGTCATCACAGTGCAGCGACCTGGAAGGATTCC AACCAGCAGCCGATGTGGTAATACCATCCCCGATGATGACAACCAGGTGGTGTCATTATCACCAGGCTCAAGATA CTCCTCTGATAGCGACGTGGAGAGCCCCTACACGCTGATCGATTCTCTTGTTCTCATGCCATACTGTAAATCACT GGACATCTTCACCGTGGGAGGTTCAGGAGATGGGGTGGTCACCAACAGTGCCTGGGAAACCTTTCAGAGATACCG ATGTCTAGAGAACAGCAGAAGCGTTGTGAAAACACCGATGACAGATGTTTGCAGAAACATCATCTTTAGCATTTC TGCCCTGTTACACCAGACAGGCCTGGCTTGTGAATGCGACCCTCAGGGTTCGTTAAGTTCCGTGTGTGATCCCAA CGGAGGCCAGTGCCAGTGCCGGCCCAACGTGGTTGGAAGAACCTGCAACAGATGTGCACCTGGAACTTTTGGCTT TGGCCCCAGTGGATGCAAACCTTGTGAGTGCCATCTGCAAGGATCTGTCAATGCCTTCTGCAATCCCGTCACTGG CCAGTGCCACTGTTTCCAGGGAGTGTATGCTCGGCAGTGTGATCGGTGCTTACCTGGGCACTGGGGCTTTCCAAG TTGCCAGCCCTGCCAGTGCAATGGCCACGCCGATGACTGCGACCCAGTGACTGGGGAGTGCTTGAACTGCCAGGA CTACACCATGGGTCATAACTGTGAAAGGTGCTTGGCTGGTTACTATGGCGACCCCATCATTGGGTCAGGAGATCA CTGCCGCCCTTGCCCTTGCCCAGATGGTCCCGACAGTGGACGCCAGTTTGCCAGGAGCTGCTACCAAGATCCTGT TACTTTACAGCTTGCCTGTGTTTTGTGATCCTGGATACATTGGTTCCAGATGTGACGACTGTGCCTCAGGATACTT TGGCAATCCATCAGAAGTTGGGGGGTCGTGTCAGCCTTGCCAGTGTCACAACAACATTGACACGACAGACCCAGA AGCCTGTGACAAGGAGACTGGGAGGTGTCTCAAGTGCCTGTACCACACGGAAGGGGAACACTGTCAGTTCTGCCG GTTTGGATACTATGGTGATGCCCTCCAGCAGGACTGTCGAAAGTGTGTCTGTAATTACCTGGGCACCGTGCAAGA GCACTGTAACGGCTCTGACTGCCAGTGCGACAAAGCCACTGGTCAGTGCTTGTGTCTTCCTAATGTGATCGGGCA GAACTGTGACCGCTGTGCGCCCAATACCTGGCAGCTGGCCAGTGGCACTGGCTGTGACCCATGCAACTGCAATGC

2594/6881 FIGURE 2385B

TGCTCATTCCTTCGGGCCATCTTGCAATGAGTTCACGGGGCAGTGCCAGTGCATGCCTGGGTTTGGAGGCCGCAC CTGCAGCGAGTGCCAGGAACTCTTCTGGGGAGACCCCGACGTGGAGTGCCGAGCCTGTGACTGTGACCCCAGGGG CAAGTGCACGCGAGGGTACTCGGGGGTCTTCCCTGACTGCACACCCTGCCACCAGTGCTTTGCTCTCTGGGATGT GATCATTGCCGAGCTGACCAACAGGACACAGATTCCTGGAGAAAGCCAAGGCCTTGAAGATCAGTGGTGTGAT $\tt CGGGCCTTACCGTGAGACTGTGGACTCGGTGGAGAGGAAAGTCAGCGAGATAAAAGACATCCTGGCGCAGAGCCCC$ CGCAGCAGAGCCACTGAAAAACATTGGGAATCTCTTTGAGGAAGCAGAGAAACTGATTAAAGATGTTACAGAAAT GATGGCTCAAGTAGAAGTGAAATTATCTGACACAACTTCCCAAAGCAACAGCACAGCCAAAGAACTGGATTCTCT ACAGACAGAAGCCGAAAGCCTAGACAACACTGTGAAAGAACTTGCTGAACAACTGGAATTTATCAAAAAACTCAGA TATTCGGGGTGCCTTGGATAGCATTACCAAGTATTTCCAGATGTCTCTTGAGGCAGAGGAGAGGGTGAATGCCTC CACCACAGAACCCAACAGCACTGTGGAGCAGTCAGCCCTCATGAGAGACAGAGTAGAAGACGTGATGATGAGCCG AGACCTTTCAGCCGCTGCCGAAATGACCTGTGGAACACCCCCAGGGGCCTCCTGTTCCGAGACTGAATGTGGCGG GCCAAACTGCAGAACTGACGAAGGAGAGGAAGTGTGGGGGGCCTGGCTGTGGTGGTTACTGTTGCACA CAACGCCTGGCAGAAAGCCATGGACTTGGACCAAGATGTCCTGAGTGCCCTGGCTGAAGTGGAACAGCTCTCCAA GATGGTCTCTGAAGCAAAACTGAGGGCAGATGAGGCAAAACAAAGTGCTGAAGACATTCTGTTGAAGACAAATGC TACCAAAGAAAAATGGACAAGAGCAATGAGGAGCTGAGAAATCTAATCAAGCAAATCAGAAACTTTTTGACCCA GGATAGTGCTGATTTGGACAGCATTGAAGCAGTTGCTAATGAAGTATTGAAAATGGAGATGCCTAGCACCCCACA GCAGTTACAGAACTTGACAGAAGATATACGTGAACGAGTTGAAAGCCTTTCTCAAGTAGAGGTTATTCTTCAGCA TAGTGCTGCTGACATTGCCAGAGCTGAGATGTTGTTAGAAGAAGCTAAAAAGAGCAAAAGAGCAAAAGTGCAACAGATGT TAAAGTCACTGCAGATATGGTAAAGGAAGCTCTGGAAGAAGCAGAAAAGGCCCAGGTCGCAGCAGAAAAGGCAAT TAAACAAGCAGATGAAGACATTCAAGGAACCCAGAACCTGTTAACTTCGATTGAGTCTGAAACAGCAGCTTCTGA GGAAACCTTGTTCAACGCGTCCCAGCGCATCAGCGAGTTAGAGAGGAATGTGGAAGAACTTAAGCGGAAAGCTGC CCAAAACTCCGGGGAGGCAGAATATATTGAAAAAGTAGTATATACTGTGAAGCAAAGTGCAGAAGATGTTAAGAA TGATGCCAGAAGGAAAGCCGAAATGCTACAAAATGAAGCAAAAACTCTTTTAGCTCAAGCAAATAGCAAGCTGCA ACTGCTCAAAGATTTAGAAAGAAAATATGAAGACAATCAAAGATACTTAGAAGATAAAGCTCAAGAATTAGCAAG ACTGGAAGGAGAAGTCCGTTCACTCCTAAAGGATATAAGCCAGAAAGTTGCTGTATAGCACATGCTTGTAACA GAGGAGAATAAAAAATGGCTGAGGTGAACAAGGTAAAACAACTACATTTTAAAAAACTGACTTAATGCTCTTCAAA

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2597/6881 FIGURE 2388

MYELVSKGYLGCTSVFVKQEQIWTLPGQSRVTWNLLISASGAPGRENFKSDRILYIPFLGTFSPQDSNIMTSVSTQLSLVLMSLLLVLPVVEAVEAGDAIALLLGVVLSITGICACLGVYARKRNGQM

GAGTGGCTGTTGAGCGGCGCCGCGGGAGTTCCGCAGGTTTCCCGTGTTCGCAGCCGGAGCCGGAGCCAGCTGAAC AGAAGATGGGCTTAGGTCACGAGCAAGGATTTGGAGCCCCTTGTTTAAAATGCAAAGAAAAATGTGAAGGATTCG AACTGCACTTCTGGAGAAAAATATGTCGTAACTGCAAGTGTGGCCAAGAAGAGCATGATGTCCTCTTGAGCAATG AAGAGGATCGAAAAGTGGGAAAACTTTTTGAAGACACCAAGTATACCACTCTGATTGCAAAACTAAAGTCAGATG GAATTCCCATGTATAAACGCAATGTTATGATATTGACGAATCCAGTTGCTGCCAAGAAGAATGTCTCCATCAATA CAGTTACCTATGAGTGGGCTCCTCCTGTCCAGAATCAAGCATTGGCCAGGCAGTACATGCAGATGCTACCCAAGG AAAAGCAGCCAGTAGCAGGCTCAGAGGGGGCACAGTACCGGAAGAAGCAGCTGGCAAAGCAGCTCCCTGCACATG ACCAGGACCCTTCAAAGTGCCATGAGTTGTCTCCCAGAGAGGGGGAGGAGGAGGAGGAGCAGTTTGTGAAGAAATATA TTCCTGGAGGGGATAGAAGCACCCCAGCAGCAGTGGGGGCCATGGAGGACAAATCTGCTGAGCACAAAAGAACTC TATTCAGCAATGAGTATACCCAGGCAGAAAACCAGAATTGGCACCTGAAACACTTCTGCTGCTTTGACTGTGATA GCATTCTAGCTGGGGAGATATACGTGATGGTCAATGACAAGCCCGTGTGCAAGCCCTGCTATGTGAAGAATCACG CTGTGGTGTCAAGGATGCCACAATGCCATCGACCCAGAAGTGCAGCGGGTGACCTATAACAATTTCAGCTGGC ATGCATCCACAGAGTGCTTTCTGTGCTCTTGCTGCAGCAAATGCCTCATTGGGCAGAAGTTCATGCCAGTAGAAG GGATGGTTTTCTGTTCAGTGGAATGTAAGAAGAGGATGTCT<u>TAG</u>GAGGAGGGCACCCAGAAGTATCGAGCCATAG CTTGGTTTAAGCATTTGATTTGTAAAACAGTAAATAATTGTATCTTTCCATAGCTTTTCAAATGTGAAATCATTT TTGGAAGCTTGGATCTCATTAAACTTCATGTCTCTATTCCATTTGTGCCACACACTTAAAAGTTAGTGTACTGAA TGGAAAGATGAGCATTCCTAGTTCTACACTTCTTTTTTCCCCCTCATGTGTAAAATGAAAAGAAAACTAAATTTG CCCTAATACCAAGGCGCTACGTTTATTGCCTCGTCTTATTCACTGACCTTTGTAATGATACACAGTGAATTCTTT TTGACAAAGAGAAATGCAGTGTAGTATGCAGAGCTGCTGTTTTAATGCCTATGCATTTACTCTTTCCTGATTTAG GCAGAGGTGGCATTTTCTTTATTGCATTTCTCTATTTTTTTAATGTACCCTACCTTCAGTATTCTCTTTGTAAGT TGGTGACTTGCATCTGTGGCCTTGAATATTTTATTATCACATGTGGCATAACAGTATCCACACTTTTTAGTTCTT TATTTTTTTTTTTTTTTTTTTTTTTGAGCAATTCTCCTGCCTCAGCCTCCCAAATAGCTGGGATTACAGGTGCATGCCAC CACACCCAGCTAATTTTTGTATTTTTAGTAGAGACAGGTTTTCACCATGTTAGCCAGGCTGGTCTCAAACTCCTG ACCTCAGATGATCCGCCTGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGTGTGGGAGCCACCATGCCTGACCCA CACACTTTTTACTTGTATAGATGATTTTTGGCTTGGACATAAAAGCCAAGCCACCCATTTGCTTTTAATCCAAAG TTTTTTGCATGGTTTTTATTCTTTCCTAATGGATCCTGTTTTATAATACTTCCAAGCCTGTCCATGGATATATCA AATGTCTTCACTTGTATATTTTCATGGCTAGGTATTTCTAATGTTTATTCTTCCCTGTGTACTTCTACACATAGC

MDLENKVKKMGLGHEQGFGAPCLKCKEKCEGFELHFWRKICRNCKCGQEEHDVLLSNEEDRKVGKLFEDTKYTTL IAKLKSDGIPMYKRNVMILTNPVAAKKNVSINTVTYEWAPPVQNQALARQYMQMLPKEKQPVAGSEGAQYRKKQL AKQLPAHDQDPSKCHELSPREVKEMEQFVKKYKSEALGVGDVKLPCEMDAQGPKQMNIPGGDRSTPAAVGAMEDK SAEHKRTQYSCYCCKLSMKEGDPAIYAERAGYDKLWHPACFVCSTCHELLVDMIYFWKNEKLYCGRHYCDSEKPR CAGCDELIFSNEYTQAENQNWHLKHFCCFDCDSILAGEIYVMVNDKPVCKPCYVKNHAVVCQGCHNAIDPEVQRV TYNNFSWHASTECFLCSCCSKCLIGQKFMPVEGMVFCSVECKKRMS

AAAGCACAGCCCAGGGAAACCTCCTCACAGTTTTCATCCAGCCACGGGCCAGC<u>ATG</u>TCTGGGGGCAAATACGTAG ACTCGGAGGGACATCTCTACACCGTTCCCATCCGGGAACAGGGCAACATCTACAAGCCCAACAACAAGGCCATGG CAGACGAGCTGAGCGAGAAGCAAGTGTACGACGCGCACACCAAGGAGATCGACCTGGTCAACCGCGACCCTAAAC ACCTCAACGATGACGTGGTCAAGATTGACTTTGAAGATGTGATTGCAGAACCAGAAGGGACACACAGTTTTGAĊG GCATTTGGAAGGCCAGCTTCACCACCTTCACTGTGACGAAATACTGGTTTTACCGCTTGCTGTCTGCCCTCTTTG GCATCCCGATGGCACTCATCTGGGGCATTTACTTCGCCATTCTCTCTTTCCTGCACATCTGGGCAGTTGTACCAT GCATTAAGAGCTTCCTGATTGAGATTCAGTGCATCAGCCGTGTCTATTCCATCTACGTCCACACCGTCTGTGACC AAGGATAGAAGTATACCTGATTTTTTTTCCTTTTAATTTTCCTGGTGCCAATTTCAAGTTCCAAGTTGCTAATAC AGCAACAATTTATGAATTGAATTATCTTGGTTGAAAATAAAAAGATCACTTTCTCAGTTTTCATAAGTATTATGT CTCTTCTGAGCTATTTCATCTATTTTTGGCAGTCTGAATTTTTAAAACCCATTTAAATTTTTTTCCTTACCTTTT TATTTGCATGTGGATCAACCATCGCTTTATTGGCTGAGATATGAACATATTGTTGAAAGGTAATTTGAGAGAAAT ATTTTATGTTAAGGGAAGAATTCCAGGGTATGGCCATGGAGTGTACAAGTATGTGGGCAGATTTTCAGCAAACTC TTTTCCCACTGTTTAAGGAGTTAGTGGATTACTGCCATTCACTAATCCAGTAGGATCCAGTGATCCTTACA AGTTAGAAAACATAATCTTCTGCCTTCTCATGATCCAACTAATGCCTTACTCTTGAAATTTTAACCTATGAT ATTTTCTGTGCCTGAATATTTGTTATGTAGATAACAAGACCTCAGTGCCTTCCTGTTTTTCACATTTTCCTTTTTC AAATAGGGTCTAACTCAGCAACTCGCTTTAGGTCAGCAGCCTCCCTGAAGACCAAAATTAGAATATCCATGACCT AGTTTTCCATGCGTGTTTCTGACTCTGAGCTACAGAGTCTGGTGAAGCTCACTTCTGGGCTTCATCTGGCAACAT CTTTATCCGTAGTGGGTATGGTTGACACTAGCCCAATGAAATGAATTAAAGTGGACCAATAGGGCTGAGCTCTCT GTGGGCTGGCAGTCCTGGAAGCCAGCTTTCCCTGCCTCTCATCAACTGAATGAGGTCAGCATGTCTATTCAGCTT CGTTTATTTTCAAGAATAATCACGCTTTCCTGAATCCAAACTAATCCATCACCGGGGTGGTTTAGTGGCTCAACA TTGTGTTCCCATTTCAGCTGATCAGTGGGCCTCCAAGGAGGGGCTGTAAAATGGAGGCCATTGTGTGAGCCTATC AGAGTTGCTGCAAACCTGACCCCTGCTCAGTAAAGCACTTGCAACCGTCTGTTATGCTGTGACACATGGCCCCTC AAAGATTGAAGTATTTTGCTGGAATAAGTTCAAATTCTTCTGAACTCAAACTGAGGAATTTCACCTGTAAACCTG AGTCGTACAGAAAGCTGCCTGGTATATCCAAAAGCTTTTTATTCCTCCTGCTCATATTGTGATTCTGCCTTTGGG GACTTTTCTTAAACCTTCAGTTATGATTTTTTTTTCATACACTTATTGGAACTCTGCTTGATTTTTTGCCTCTTCC AGTCTTCCTGACACTTTAATTACCAACCTGTTACCTACTTTGACTTTTTGCATTTAAAACAGACACTGGCATGGA TATAGTTTTACTTTTAAACTGTGCATAACTGAAAATGTGCTATACTGCATACTTTTTAAATGTAAAGATATTT TTATCTTTATATGAAGAAAATCACTTAGGAAATGGCTTTGTGATTCAATCTGTAAACTGTGTATTCCAAGACATG TCTGTTCTACATAGATGCTTAGTCCCTCATGCAAATCAATTACTGGTCCAAAAGATTGCTGAAATTTTATATGCT TACTGATATATTTTACAATTTTTTATCATGCATGTCCTGTAAAGGTTACAAGCCTGCACAATAAAAATGTTTAAC GGTT

MSGGKYVDSEGHLYTVPIREQGNIYKPNNKAMADELSEKQVYDAHTKEIDLVNRDPKHLNDDVVKIDFEDVIAEP EGTHSFDGIWKASFTIFTVTKYWFYRLLSALFGIPMALIWGIYFAILSFLHIWAVVPCIKSFLIEIQCISRVYSI YVHTVCDPLFEAVGKIFSNVRINLQKEI

MADLEEQLSDEEKVRIAAKFIIHAPPGEFNEVFNDVRLLLNNDNLLREGAAHAFAQYNLDQFTPVKIEGYEDQVLITEHGDLGNGKFLDPKNRICFKFDHLRKEATDPRPCEVENAVESWRTSVETALRAYVKEHYPNGVCTVYGKKIDGQTIIACIESHQFQAKNFWNGRWRSEWKFTITPSTTQVVGILKIQVHYYEDGNVQLVSHKDIQDSLTVSNEVQTAKEFIKIVEAAENEYQTAISENYQTMSDTTFKALRRQLPVTRTKIDWNKILSYKIGKEMQNA

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TGGAGCTAAGCTGTTTCCAGGGTGACAGAGTGGCGACCTCGGTGGTCGATTGAGCAGGTCTGAGAATTGTTCCCA ${\tt AAGGGTTGTGCGTCACCGAGTCGTTGGCGCTGTCATCGCGGGTGTGCTGAAGAAGACCACTGGCCTTGTGGGATT}$ GGCTGTGTGCAATACTCCTCACGAGAGGCTAAGAATATTGTACACAAAGATTCTTGATGTTCTTGAGGAAATCCC TAAAAATGCAGCATATAGAAAGTATACAGAACAGATTACAAATGAGAAGCTGGCTATGGTTAAAGCGGAACCAGA TGTTAAAAAATTAGAAGACCAACTTCAAGGCGGTCAATTAGAAGAGGTGATTCTTCAGGCTGAACATGAACTAAA TCTGGCAAGAAAATGAGGGAATGGAAACTATGGGAGCCATTAGTGGAAGAGCCTCCTGCCGATCAGTGGAAATG CGTGTTCTTATTACTGACATTTTGTAATCAAGAAAAGTGATATAGAAAATATGTAGGAGACTGTTAAAATTGGTG ATTATGGTAATATGGTCATGTGAATCAATTTTTGATTTATAAAGTACTCACACAAGTTGTTTCAAAGATGATATT TCTGTGAACAGAGGGCCATGGGAAGATTTGAAAATTATTAAAGAAAATTCCTACAGATTTTCAATGCAGAGAC CATAATCAAAAAGTAAACTTTCTTTAGTAGTATGTTCAATACATCATTTAATTTTTTAAGTTATCCTGAAGAAGG AAAGGTCCTTAATTATTATAGTCTAAACAAATTTATAGATTACTGTTTGAAGTAAATAATACGAGTGAATATTTT CAAATGTGATAAAATAGCACAAGTGGCTGGTGATAAAATTTGAAATTATGGTTAACCTCAGCTGTGATCTTATGT ATGTAAAGTGAAATTTAAATAGATAATTATAGGTTGATTACAAAATCCATAGTGTCATTTTATTTTAGTCATTAT TGAATTATACCATTTACTCTGTTTTCTTATAGTCTTAATTTTATTATATTTTGTTGTTACTGTATTATATTTGAA AATCAACCTAATTACATCAGGATAGAGGTAGAGTTTCTGTAAAAGAAGAGACATTAAGAGTTCCTGAAATTTATA TCTGGCATACCGATAGGCTTATATTCAAAACATCTTAGTCATACGACCATAAATTAAAAGTGGAGTCACTAAATA GTTTGCAGTACGTTTCTAATATAAGTGTAGGTGGGTATCAAAACAAGACAAATGCTGTTCAGGGAAAGAAGTTGG CAAGCTTAAGGTTAAACAAAAATAAAATTACATGTGTTTTCGCCTTCCTA

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2606/6881 FIGURE 2397

 ${\tt MAGVLKKTTGLVGLAVCNTPHERLRILYTKILDVLEEIPKNAAYRKYTEQITNEKLAMVKAEPDVKKLEDQLQGG}\\ {\tt QLEEVILQAEHELNLARKMREWKLWEPLVEEPPADQWKWPI}$

MGLTVSALFSRIFGKKQMRILMVGLDAAGKTTILYKLKLGEIVTTIPTIGFNVETVEYKNICFTVWDVGGQDKIR PLWRHYFQNTQGLIFVVDSNDRERVQESADELQKMLQEDELRDAVLLVFANKQDMPNAMPVSELTDKLGLQHLRS RTWYVQATCATQGTGLYDGLDWLSHELSKR

WO 2004/030615 PCT/US2003/028547

2609/6881 FIGURE 2400

GCGAGTAGAACGTGTGGCGGCGGGGGGAGATCGCGTCTCTTTCGCTCCGTGTCCCGCTGCTGCTCCTGTGAGCGCC CGGCGAGTCCGTCCGCCGTCCGCAGCTGGTAGCCAGCCTGCCCTCGCCTCGACTCCCTTTCACCAACAC CGACACCCACATTGACACCTCCAGTCCGGCCAGCCGCTCCACTCGTTGCCTTTGCATCTCCACACATGGCGTCCT $\tt CCGCGCAGAGCGGCGCTCCTCCGGGGGACCCGCGGTCCCCACCGTGCAGCGGGCATCATCAAGATGGTCCTCT$ CAGGGTGCGCCATCATTGTCCGAGGTCAGCCTCGTGGTGGGCCTCCTCCTGAGCGGCAGATCAACCTCAGCAACA TTCGTGCTGGAAATCTTGCTCGCCGGGCAGCCGCCACACACCTGATGCAAAGGATACCCCTGATGAGCCCTGGG CCCAGGGGCGAGAGTATGGCATGATCTACCTTGGAAAAGATACCAATGGGGAAAACATTGCAGAATCACTGGTTG AACAAGCAAAGGCAGCCAAGAAAGGGATGTGGAGTGAGGGGAACGGTTCACATACTATCCGGGATCTCAAGTATA CCATTGAAAACCCAAGGCACTTTGTGGACTCACACCACCAGAAGCCTGTTAATGCTATCATCGAGCATGTGCGGG ACGGCAGTGTGGTCAGGGCCCTGCTCCCCAGATTACTACCTGGTTACAGTCATGCTGTCAGGCATCAAGTGCC ${\tt CAACTTTCGACGGGAAGCAGATGGCAGTGAAACTCCAGAGCCTTTTGCTGCAGAAGCCAAATTTTTCACTGAGT}$ CGCGACTGCTTCAGAGAGATGTTCAGATCATTCTGGAGAGCTGCCACAACCAGAACATTCTGGGTACCATCCTTC ACACCCGGGGCGCAGAAAAGCTGAGGGCGGCAGAGAGGTTTGCCAAAGAGCGCAGGCTGAGAATATGGAGAGACT ATGCCATTGTTGTGAAGCTGAACTCAGGCGATTACAAGACGATTCACCTGTCCAGCATCCGACCACCGAGGCTGG AGGGGGAGAACACCCAGGATAAGAACAAGAAACTGCGTCCCCTGTATGACATTCCTTACATGTTTGAGGCCCGGG CAGAGACAGTGCCTGTCTTTCAGAGCGTACCTGTGCCACTGTCACCATTGGAGGAATAAACATTGCTGAGGCTC TTGTCAGCAAAGGTCTAGCCACAGTGATCAGATACCGGCAGGATGATGACCAGAGATCATCACACTACGATGAAC TTGCAGATATATCTGGGGATACCCAAAAAGCAAGCAGTTCCTGCCTTTTCTTCAGCGGGCAGGTCGTTCTGAAG CTGTGGTGGAATACGTCTTCAGTGGTTCTCGTCTCAAACTCTATTTGCCAAAGGAAACTTGCCTTATCACCTTCT AGGAAGCTACACTTTTCACCAAGGAACTGGTGCTGCAGCGAGAGGTGGAGGTGGAGGTGGAGACCATGGACAAGG AGGTCCACTTCACCGCCGAACGCAGCTCCTACTACAAGTCCCTGCTGTCTGCCGAGGAGGCCGCAAAGCAGAAGA AAGAGAAGGTCTGGGCCCACTATGAGGAGCAGCCCGTGGAGGAGGTGATGCCAGTGCTGGAGGAGAAGGAGCGAT CTGCTAGCTACAAGCCCGTGTTTGTGACTGAGATCACTGATGACCTGCACTTCTACGTGCAGGATGTGGAGACCG GCACCCAGTTGGAGAAGCTGATGGAGAACATGCGCAATGACATTGCCAGTCACCCCCTGTAGAGGGCTCCTATG AGTCTCCTGCCAAAATACATGTCTTCTACATTGACTACGGCAACAGAGAGGTCCTGCCATCCACCCGCCTGGGTA CCCTATCACCTGCCTTCAGCACTCGGGTGCTGCCAGCTCAAGCCACGGAGTATGCCTTCGCCTTCATCCAGGTGC CCCAAGATGATGCCCGCACGGACGCCGTGGACAGCGTAGTTCGGGATATCCAGAACACTCAGTGCCTGCTCA ACGTGGAACACCTGAGTGCCGGCTGCCCCCATGTCACCCTGCAGTTTGCAGATTCCAAGGGCGATGTGGGGCTGG GCTTGGTGAAGGAAGGCTGGTCATGGTGGAGGTGCGCAAGGAGAAACAGTTCCAGAAAGTGATCACAGAATACC TGAATGCCCAAGAGTCAGCCAAGAGCGCCAGGCTGAACCTGTGGCGCTATGGAGACTTTCGAGCTGATGATGCAG ACTGCCCTCGTCCCAGCTCTCTGTCCAACTGTTGATTATGTGATTTTTCTGATACGTCCATTCTCAAATGCCAGT GTGTTCACATCTTCGCTCTGGCCAGCCCATTCTGTATTTAAAGCTTTTGAGGCCCAATAAAATAGTACGTGCTGT C

MASSAQSGSSGGPAVPTVQRGIIKMVLSGCAIIVRGQPRGGPPPERQINLSNIRAGNLARRAAATQPDAKDTPD EPWAFPAREFLRKKLIGKEVCFTIENKTPQGREYGMIYLGKDTNGENIAESLVAEGLATRREGMRANNPEQNRLS ECEEQAKAAKKGMWSEGNGSHTIRDLKYTIENPRHFVDSHHQKPVNAIIEHVRDGSVVRALLLPDYYLVTVMLSG IKCPTFRREADGSETPEPFAAEAKFFTESRLLQRDVQIILESCHNQNILGTILHPNGNITELLLKEGFARCVDWS IAVYTRGAEKLRAAERFAKERRLRIWRDYVAPTANLDQKDKQFVAKVMQVLNADAIVVKLNSGDYKTIHLSSIRP PRLEGENTQDKNKKLRPLYDIPYMFEAREFLRKKLIGKKVNVTVDYIRPASPATETVPAFSERTCATVTIGGINI AEALVSKGLATVIRYRQDDDQRSSHYDELLAAEARAIKNGKGLHSKKEVPIHRVADISGDTQKAKQFLPFLQRAG RSEAVVEYVFSGSRLKLYLPKETCLITFLLAGIECPRGARNLPGLVQEGEPFSEEATLFTKELVLQREVEVEVES MDKAGNFIGWLHIDGANLSVLLVEHALSKVHFTAERSSYYKSLLSAEEAAKQKKEKVWAHYEEQPVEEVMPVLEE KERSASYKPVFVTEITDDLHFYVQDVETGTQLEKLMENMRNDIASHPPVEGSYAPRRGEFCIAKFVDGEWYRARV EKVESPAKIHVFYIDYGNREVLPSTRLGTLSPAFSTRVLPAQATEYAFAFIQVPQDDDARTDAVDSVVRDIQNTQ CLLNVEHLSAGCPHVTLQFADSKGDVGLGLVKEGLVMVEVRKEKQFQKVITEYLNAQESAKSARLNLWRYGDFRA DDADCPRPSSLSNC

TCGGAAGGGGCCAGGAGACACTGGAAGGTCCGGACGGCAGGGAAGGGGACGGGGTTCTTTCCAGTCCCACCCGTG TAGGGACACCTCTCCCCCTCATCCCCCGATGTACCCTCGCTGAATCTGGGATGGGAGAGACGAACCGAGTCTAGG CATCTGCGTAGCAGCGCGGGGAGAGCGGGGAGCCCAGGGGGAGCCCAGTCGACTCCCGGATTCCCCTGCCCCG CAGCGGTACAGCGCCCGACTGCTGCAGGCCGGCTACGAGCCCGAGAGCCCTAGATTGGACCTCGCTACACACCCG ACGACACCCCGTTCAGAACTATCTTCAGTGGTCTTACTGGCAGGTGTTGGTGTCCAGATGGATCGCCTTCGCAGG GCTAGCATGGCGGACTACCTGATCAGCGGCGCCACCGGCTACGTGCCCGAGGATGGGCTCACCGCGCAGCAGCTC TTCGCCAGCGCCGACGGCCTCACCTACAACGACTTCCTGATTCTCCCAGGATTCATAGACTTCATAGCTGATGAG GTGGACCTGACCTGACCCGGAAGATCACGCTGAAGACGCCACTGATCTCCTCCCCCATGGACACTGTG TTCCAGGCCAACGAGGTGCGGAAGGTCAAGAAGTTTGAACAGGGCTTCATCACGGACCCTGTGGTGCTGAGCCCC TCGCACACTGTGGGCGATGTGCTGGAGGCCAAGATGCGGCATGGCTTCTCTGGCATCCCCATCACTGAGACGGGC ACCATGGGCAGCAAGCTGGTGGGCATCGTCACCTCCCGAGACATCGACTTTCTTGCTGAGAAGGACCACCACCACC $\verb|CTCCTCAGTGAGGTGATGACGCCAAGGATTGAACTGGTGGTGGCTCCAGCAGGTGTGACGTTGAAAGAGGCAAAT| \\$ GAGATCCTGCAGCGTAGCAAGAAAGGGAAGCTGCCTATCGTCAATGATTGCGATGAGCTGGTGGCCATCATCGCC CGCACCGACCTGAAGAAGAACCGAGACTACCCTCTGGCCTCCAAGGATTCCCAGAAGCAGCTGCTCTGTGGGGCA GACTCGTCCCAAGGGAATTCGGTGTATCAGATCGCCATGGTGCATTACATCAAACAGAAGTACCCCCACCTCCAG GGCATGGGCTGCGGCTCCATCTGCATCACCCAGGAAGTGATGGCCTGTGGTCGGCCCCAGGGCACTGCTGTTAC AAGGTGGCTGAGTATGCCCGGCGCTTTGGTGTGCCCATCATAGCCGATGGCGGCATCCAGACCGTGGGACACGTG GTCAAGGCCCTGGCCCTTGGAGCCTCCACAGTGATGATGGGCTCCCTGCTGGCCGCCACTACGGAGGCCCCTGGC GAGTACTTCTCTCAGACGGGGTGCGGCTCAAGAAGTACCGGGGCATGGGCTCACTGGATGCCATGGAGAAGAGC GACAAAGGATCCATTCAGAAGTTCGTGCCCTACCTCATAGCAGGCATCCAACACGGCTGCCAGGATATCGGGGCC CGCAGCCTGTCTGTCCTTCGGTCCATGATGTACTCAGGAGAGCTCAAGTTTGAGAAGCGGACCATGTCGGCCCAG ATTGAGGGTGGTGTCCATGGCCTGCACTCTTACGAAAAGCGGCTGTACTGAGGACAGCGGTGGAGGCCGAGGTGG AGGCCCTGCCCTCAGGTCTTTCTTGCTGCAGCCTGCTCCAGCCTGGCCCCCACCCCAGGGGCAGGCGGCC CCTCCTGGCTTCTCCTGTAGGGCACCTCCCTGCCCCTAGCCTCCCAGGAAATGGTGCTCTCCTGGCCCTGCCTCT GGCCCTTCCCGGGCCGCTGCCCCTCAGCCATGTGGCACTTCTGAGCTCCTGACCTAGGCCAAGGGGAGGTCTCTG CCCCTTCCCCGGCCTGGGCTACCCTTGGGTCCTGCTCCTCAGGCCGCTCCCCTGTCCCTGGCCATGGGTAGGA GACTGCCCTGGTCATGGCCGCCTGCCTGTCATTCCTGACTCACCACCGTCCCCAGGTGAACCATTCCTCCCTTCT CCTCAGCTGCAGTCGAAGGCTTTAACTTTGCACACTTGGGATCACAGTTGCGTCATTGTGTATTAAATACTTGGA ATAAATCAAGCAGGT

TGGGATTACAGGTAAGTGCCACCACACCCAGCTGATTTTTGTGTTTTTTTGTAGAGACGAGGTTTCGCCATGTTTC TGAGCCACCTTGCTCATTCTAGTTTAAACTTTGGAGTGGTTTTGTGTCTCCTGATTGGACTCCTGCAAATACAGAA TTGATGCTAGGAAGGGTACCAGGAGATAGACGCACACAGATGGGATTTGGGAATAGGTTTGGTTATCCAAGGAGC AGTGCTGAGCTCCTTGCTAATGGGATATGGGATGCTGGTGATTTCCAGTAAGTGACCTCAAAATTACTCAGGCTA CCACATACTGTTGATGTGATGAAATGCCAGTTGAAGCACCTGTCCTGCGAGCTTAGGGGTGCTACAAGTTGACC ACATGTTATTCAGGTGGGACCATCCAGTTGCAGGAAAACAAGCTTAAGACGCCCACTGATTCTACATTATGCTCC TACCTCCCGGCAGCCTCTCCAGGCCCAGAACTTTCTCCAATCAGCCTCTACAGACCAAGCTCATGACTCACAATG GCCTATTTAGGCCCATACCCTACGTCACGGCAGTCTCCGCAGATGAGCCTACTGCCCCACAACAGCCTCCACAGG CACAGCTCCATCGTTACAATGGCCTCTTTAGACCCAGCTCCTGCCTCCCAGCCTTCTCTCCAGGCCCTGAACTTT CTCAAGTCGACCTCACCAGGCCCAGCTCATGCTTCTTTGCAGCCTCTCCAGGCCCAGCTCCTGCATCTTGGTGGC CCCTCCAGGCCCAGCCTCTGCCTCCGGTCGGCCTCTACAGTCCCAACATCTGCCTCACAGCAGATTCTTCACGCC CAGCATCTGCCTCACTGTGGACCCCCAAGCCAAGCTCCCAACCTTTCAGCAGCTTCTACACACCCCAGCTCCTGC CACCCAGTGGCCTCTTTAGGCCAAGCTCATGCTTCACAAGGGCCTTTCCAGGCCCAACTTTTGTCTCATGGCAAC CTTCCCTGGCCAGATTCCTGCCTGTCTCCCAGCAGCCTAGACAGGCCCAGGGCCTCTCTACATGCAGCTTATGCC TCACGGTGGCCTCTCCAGGCCCAACTCCTGTCCCAGGACGTCATCTCCGGGCCCAAAACTTACTCAAGTCAGACT $\tt CTGTAGTCCCAACTGCTGCTCCTGGTGGCCTATGAAGGCCCAAAATCTCCTCAAGTTGACCTTTCCAGGCCCAG$ CTCCTGCCTCTGTCAGCGTCTACAGGCCCAACCTCTACGTCATGGGGGGCTTCTCCAGGCCCACCTCTTCCTCTT ${\tt GGCTGGGTCTACAGGCACAACTGCTGCCTCACAACAGCCTTTTTTGGCCCAGTTCCTGTCCAGCTCATGGCGGCC}$ AATGTAGGCCCAAAACTTCCTCAAGTCAAACTCTCCAGGCCCACCTTCTGCTTCCCAGTGGCATGAACAGGCCCA GCTTTGACTTGAGAACAGCCTCTGCAGGCCCTGCTCTTTGCCTCCCAGGGGCCTTTTTCCAGGCCCAGCTCTTGCCT CCAAAACTTCCTCAAATCAGCCTTTTGCCCAACTTCTGTCTACTGTCGGACTCTACAGGCCAGCCTCTGCCTCAC AGTGGACCCTCCAGACCCAGATGGTGTCTCACTGTGGCATCCTCAGTCGAAGCTCCTGCCTTTCGGCAGCCTCTC CAGGCCCAGCTCCTCCTGCCTCCCAGTGGCCTCTTTCGGCCCAGC

MLLPPGSLSRPRTFSNQPLQTKLMTHNGLFRPIPYVTAVSADEPTAPQQPPQAQLHRYNGLFRPSSCLPAFSPGP ELSQVDLTRPSSCFFAASPGPAPASWWPLQAQPLPPVGLYSPNICLTADSSRPASASLWTPQAKLPTFQQLLHTQ LLPPSGLFRPSSCFTRAFPGPTFVSWQPSLARFLPVSQQPRQAQGLSTCSLCLTVASPGPTPVPGRHLRAQNLLK SDSVVPTAASWWPMKAQNLLKLTFPGPAPASCQRLQAQPLRHGGFSRPTSSSWLGLQAQLLPHNSLFWPSSCPAH GGQCRPKTSSSQTLQAHLLLPSGMNRPSFDLRTASAGPALASQGLFPGPALASWQLPQAKFLPACQQPQQA

2616/6881 FIGURE 2407A

CGCCGGCCTCGGCCTGGGCGATGAGACAGACGAGATGCCGTCCACGGAGAAGGACCTGGCGGAGGACGCCCGTG GAAGAAGATCCAGCAGAACACATTCACGCGCTGGTGCAATGAGCACCTCAAGTGCGTGGGCAAGCGCCTGACCGA CCTGCAGCGCGACCTCAGCGACGGGCTCCGGCTCATCGCGCTGCTCGAGGTGCTCAGCCAGAAGCGCATGTACCG CAAGTTCCATCCGCGCCCCAACTTCCGCCAAATGAAGCTGGAGAACGTGTCCGTGGCCCTCGAGTTCCTCGAGCG CGAGCACATCAAGCTCGTGTCCATAGACAGCAAGGCCATCGTGGATGGGAACCTGAAGCTGATCCTGGGCCTGAT CTGGACGCTGATCCTGCACTACTCCATCTCCATGCCCATGTGGGAGGATGAAGATGATGAGGATGCCCGCAAACA GACGCCCAAGCAGCGGCTGCTTGGCTGGATCCAGAACAAGGTGCCCCAGCTGCCCCATCACCAACTTCAACCGTGA CTGGCAGGACGGCAAAGCTCTGGGCGCCCTGGTGGACAACTGCGCCCCGGTCTCTGCCCCGACTGGGAGGCCTG GGACCCCAACCAGCCCGTGGAGAACGCCCGGGAGGCCATGCAGCAGGCCGACGACTGGCTTGGGGTGCCCCAGGT GGCCAAGCTCAAACCTGGTGCCCCTGTTCGATCCAAGCAGCTGAACCCCAAGAAAGCCATCGCCTATGGGCCTGG CATCGAGCCACAGGGCAACACCGTGCTGCAGCCTGCCCACTTCACCGTGCAGACGGTGGACGCGGGCGTGGGCGA GGTGCTGGTCTACATCGAGGACCCTGAAGGCCACACCGAGGAGGCTAAGGTGGTTCCCAACAATGACAAGGATCG CACCTATGCTGTCTCCTATGTGCCCAAGGTCGCTGGGTTACACAAGGTGACCGTGCTCTTTGCTGGCCAGAACAT TGAACGCAGTCCCTTTGAGGTGAACGTGGGCATGGCCCTGGGAGATGCCAACAAGGTGTCAGCCCGTGGCCCTGG CCTGGAACCTGTGGGCAATGTGGCCAACAAACCCACCTACTTTGACATCTACACTGCGGGGGCCGGCACTGGCGA TGTTGCTGTGGTGATCGTGGACCCACAGGGCCGGCGGCACACAGTGGAGGTGGCCCTGGAGGACAAGGGTGACAG CACGTTCCGCTGCACATACAGACCTGCCATGGAGGGGCCACATACCGTGCATGTGGCCTTTGCGGGTGCCCCCAT GCAGCCCAAGGGTGTTCGCGTGAAAGAGGTGGCTGACTTCAAGGTGTTTACCAAGGGTGCCGGCAGCGGGAGCT GTGCGAGTACTACCCGGTGGTGCCTGGGAAGTATGTGGTGACCATCACGTGGGGCGGCTACGCCATCCCTCGCAG $\tt CCCCTTTGAGGTACAGGTGAGCCCAGAGGCAGGAGTGCAAAAGGTCCGGGCCTGGGGTCCTGGTTTGGAGACTGG$ $\tt GGGGCCCTCACAAGCCAAGATCGAATGTGACGACAAGGGGGGATGGCTCCTGCGATGTGCGGTACTGGCCCACGGA$ GCCTGGGGAGTACGCTGTGCACGTCATCTGTGACGATGAGGACATCCGAGACTCACCCTTCATTGCCCACATCCT GCCCGCCCACCTGACTGCTTCCCAGATAAGGTGAAGGCCTTTGGGCCTGGCCTGGAGCCTACCGGCTGCATCGT GGACAAGCCCGCTGAGTTCACCATTGATGCTCGTGCAGCTGGCAAGGGAGACCTGAAGCTCTATGCCCAGGACGC ${\tt CGACGGCTGTCCCATCGACATCAAGGTGATCCCCAACGGCGACGGCACCTTCCGCTGCTCCTACGTGCCCACCAA}$ GCCCATTAAGCACCATCATCATCTCCTGGGGAGGCGTAAACGTGCCCAAGAGCCCCTTCCGGGTGAACGTGGG ${\tt CACCTACTTCACGGTGGACTGCAGCGAGGCGGGGCAAGGCGACGTGAGCATCGGCATCAAGTGCGCCCCAGGCGT}$ GGTGGGCCCTGCAGAGGCTGACATTGACTTCGACATCATCAAGAATGACAACGACACCTTCACCGTCAAGTACAC ${\tt GCCACCAGGGGCGGCCGCTACACCATCATGGTGCTGTTTGCCAACCAGGAGATCCCCGCCAGCCCCTTCCACAT}$ CAAGGTGGACCCATCCCACGATGCCAGCAAAGTCAAGGCCGAGGGCCCTGGGCTGAATCGCACAGGTGTGGAAGT AGCCAAGGGCGAGGTTGTGCGGGACTTTGAGATCATAGACAACCATGACTACTCCTACACTGTCAAGTACACCGC TGTCCAGCAGGGCAACATGGCAGTGACAGTGACTTATGGCGGGGACCCTGTCCCCAAGAGCCCCTTTGTGGTGAA TGTGGCACCCCGCTGGACCTCAGCAAAATCAAAGTTCAGGGCCTTAATAGCAAGGTGGCTGTGGGACAGGAACA AGCATTCTCTGTGAACACACGAGGGGCTGGCGGTCAGGGCCAACTGGATGTGCGGATGACTTCGCCCTCTCGCCG GCCCATCCCTGCAAGCTGGAGCCAGGCGGTGGAGCGGAAGCCCAGGCTGTGCGCTACATGCCCCCGGAGGAGGG GCCCTACAAGGTGGATATCACCTACGATGGTCACCCGGTGCCTGGCAGCCCGTTTGCTGGAGGGTGTCCTGCC $\verb|CCCTGATCCCTCCAAGGTCTGTGCTTATGGCCCGGGTCTCAAGGGTGGACTGGTAGGCACCCCGGCGCCATTCTC| \\$ CATCGACACCAAGGGGGCTGGCACAGGTGGCCTGGGGCTGACCGTAGAGGCCCCTGCGAGGCCAAGATCGAGTG CCAGGACAATGGTGATGGCTCATGTGCTGTCAGCTACCTGCCCACGGAGCCTGGCGAGTACACCATCAACATCCT GTTTGCTGAGGCCCACATCCCTGGCTCGCCCTTCAAAGCCACCATTCGGCCTGTGTTTGACCCGAGCAAGGTGCG GGCCAGTGGACCGGGCCTGGAGCGCGGCAAGGTCGGTGAGGCAGCCACCTTCACTGTGGACTGCTCAGAGGCAGG

2617/6881 FIGURE 2407B

CGAGGCGGAGCTGACCATTGAGATCCTGTCGGATGCCGGGGTCAAGGCCGAGGTGCTGATCCACAACAACGCGGA TGGCACCTACCACATCACCTACAGCCCTGCCTTCCCTGGCACCTACACCATTACCATCAAGTATGGCGGGCATCC CGTGCCCAAATTCCCCACCCGTGTCCATGTGCAGCCTGCGGTCGATACCAGTGGCGTCAAGGTCTCAGGGCCTGG TGTTGAGCCACACGGTGTCCTGCGGGAGGTGACCACTGAGTTCACTGTGGATGCAAGATCCCTAACAGCCACAGG CGGCAACCACGTGACGGCTCGTGTGCŤCAACCCCTCGGGGGCCAAGACACACCTATGTGACAGACAATGGGGA CGGCACCTACCGAGTGCAGTACACCGCCTACGAGGAGGGCGTGCATCTGGTGGAGGTCCTGTATGATGAGGTCGC TGTGCCCAAGAGCCCCTTCCGAGTGGGCGTGACCGAGGGCTGTGATCCCACCCGCGTCCGAGCCTTCGGGCCAGG CCTGGAGGGTGGCTTGGTCAACAAGGCCAACCGATTCACTGTGGAGACCAGGGGAGCGGGCACCGGGGGCCTTGG CCTAGCCATCGAGGGTCCCTCGGAAGCCAAGATGTCCTGCAAGGACAACAAGGATGGTAGCTGCACCGTGGAGTA CATCCCCTTCACTCCTGGAGACTATGACGTCAACATCACCTTCGGGGGGCGCCCATCCCAGGGAGCCCGTTCCG CGTGCCAGTGAAGGATGTGGTGGACCCTGGGAAGGTGAAGTGCTCAGGGCCAGGGCTGGGGGCTGGTGTCAGGGC CACAGGTGTGGCCGAGCCTGTGGAGGTGCGGGACAATGGAGATGGCACCCACACTGTCCACTACACCCCAGCCAC TGACGGGCCCTACACGGTAGCCGTCAAGTATGCTGACCAGGAGGTGCCACGCAGCCCCTTCAAGATCAAGGTCCT CCCAGCTCATGATGCCAGCAAGGTGCGGGCCAGCGCCCAGGCCTCAACGCCTCTGGCATCCCTGCCAGCCTGCC TGTGGAGTTCACCATCGACGCACGGGACGCGGGCGAGGGGTTGCTCACTGTCCAGATCTTGGACCCCGAGGGTAA GCCCAAGAAGGCCAACATCCGGGACAATGGGGATGGCACGTACACTGTGTCCTACCTGCCGGACATGAGTGGCCG GTACACCATCACCATCAAGTATGGCGGTGATGAGATCCCCTACTCGCCCTTCCGCATCCATGCTCTGCCCACTGG GGATGCCAGCAAGTGCCTCGTCACAGTGTCCATTGGAGGCCATGGCCTGGGTGCCTGGGCCCTCGAATCCA GATTGGGCAGGAGACGGTGATCACGGTGGATGCCAAGGCAGCCGGTGAGGGGAAGGTGACATGCACGGTGTCCAC GCCGGATGGGGCAGAGCTCGATGTGGATGTGGTTGAGAACCATGACGGTACCTTTGACATCTACTACACAGCGCC CGAGCCGGGCAAGTACGTCATCACCATCCGCTTCGGGGGTGAGCACATCCCCAACAGCCCCTTCCACGTGCTGGC GTGTGACCCCTGCCGCACGAGGAGGAGCCCTCTGAAGTGCCACAGCTGCGCCAGCCCTACGCTCCTCCCCGGCC CTTCAACCTGGTCATCCCCTTCGCGGTGCAGAAAGGGGAGCTCACAGGAGAGGTGCGGATGCCCTCGGGGAAGAC GGCACGGCCCAACATCACCGACAACAAGGACGGCACCATCACGGTGAGGTATGCACCCACTGAGAAAGGCCTGCA CCAGATGGGGATCAAGTATGACGGCAACCACATCCCTGGGAGCCCCTTACAGTTCTATGTGGATGCCATCAACAG CAAAGATGCTGGAGAAGGGGGTCTGTCACTGGCCGTGGAGGGCCCATCCAAGGCAGAGATCACCTGTAAGGACAA CAAGGATGGCACCTGCACCGTGTCCTATCTGCCGACTGCGCCTGGAGACTACAGCATCATCGTGCGCTTCGATGA CAAGCACATCCCGGGGAGCCCCTTCACAGCCAAGATCACAGGTGATGACTCCATGAGGACCTCACAGCTGAATGT GGGCACCTCCACGGACGTGTCACTGAAGATCACCGAGAGTGATCTGAGCCAGCTGACCGCCAGCATCCGTGCCCC CTCGGGCAACGAGGAGCCCTGCCTGAAGCGCCTGCCCAACCGGCACATTGGGATCTCCTTCACCCCCAAGGA GGTCGGGGAGCACGTGGTGAGCGTGCGCAAGAGTGGCAAGCATGTCACCAACAGCCCCTTCAAGATCCTGGTGGG GCCATCTGAGATCGGGGACGCCAGCAAGGTGCGGGTCTGGGGCAAGGGGCTTTCCGAGGGACACACATTCCAGGT GGACATCAACTGTGAGGACATGGAGGACGGGACATGCAAAGTCACCTACTGCCCCACCGAGCCCGGCACCTACAT CATCAACATCAAGTTTGCTGACAAGCACGTGCCTGGAAGCCCCTTCACTGTGAAGGTGACCGGCGAGGGCCGCAT GAAGGAGAGCATCACCCGGCGGAGACAGGCACCTTCCATCGCCACCATCGGCAGCACCTGTGACCTCAACCTCAA GATCCCAGGAAACTGGTTCCAGATGGTGTCTGCCCAGGAGCGCCTGACACGCACCTTCACACGCAGCAGCCACAC GTCCACCCAGGTCGGCGGGACCCCTTCCCTGCTGTTTTGGGGACTTCCTGGGCCGGGAGCGCCTGGGATCCTT CGGCAGCATCACCCGGCAGCAGGAGGGTGAGGCCAGCTCTCAGGACATGACTGCACAGGTGACCAGCCCATCGGG GCCCCATACGGTCGCTGTCAAGTACCGTGGCCAGCACGTGCCCGGCAGCCCCTTTCAGTTCACTGTGGGGCCGCT GGGTGAAGGTGGTGCCCACAAGGTGCGGGCCGGAGGCACAGGGCTGGAGCGAGGTGTGGCCGGCGTGCCAGCCGA GTTCAGCATCTGGACCCGGGAGGCTGGCGCTGGGGGGCCTGTCCATTGCTGGAGGGTCCTAGCAAAGCGGAGAT TGCATTTGAGGATCGCAAAGATGGCTCCTGCGGCGTCTCCTATGTCGTCCAGGAACCAGGTGACTATGAGGTCTC

FIGURE 2407C

CGGTGCCCGGGGCGTGATTGATGCCCGGGTGCACACACCCTCGGGGGCTGTGGAGGAGTGCTACGTCTCTGAGCT GGACAGTGACAAGCACCATCCGCTTCATCCCCCACGAGAATGGCGTCCACTCCATCGATGTCAAGTTCAACGG TGCCCACATCCCTGGAAGTCCCTTCAAGATCCGCGTTGGGGAGCAGAGCCAGGCTGGGGACCCAGGCTTGGTGTC AGCCTACGGTCCTGGGCTCGAGGGAGGCACTACCGGTGTGTCATCAGAGTTCATCGTGAACACCCTGAATGCCGG $\verb|CTCGGGGGCCTTGTCTGTCACCATTGATGGCCCCTCCAAGGTGCAGCTGGACTGTCGGGAGTGTCCTGAGGGCCA|\\$ TGTGGTCACTTATACTCCCATGGCCCCTGGCAACTACCTCATTGCCATCAAGTACGGTGGCCCCCAGCACATCGT GGGCAGCCCTTCAAGGCCAAGGTCACTGGTCCGAGGCTGTCCGGAGGCCACAGCCTTCACGAAACATCCACGGT TCTGGTGGAGACTGTGACCAAGTCCTCCTCAAGCCGGGGCTCCAGCTACAGCTCCCAAGTTCTCCTCAGA TGCCAGCAAGGTGGTGACTCGGGGCCTTGGGCTGTCCCAGGCCTTCGTGGGCCAGAAGAACTCCTTCACCGTGGA CTGCAGCAAAGCAGGCACCAACATGATGATGGTGGGCGTGCACGGCCCCAAGACCCCCTGTGAGGAGGTGTACGT GAAGCACATGGGGAACCGGGTGTACAATGTCACCTACACTGTCAAGGAGAAAGGGGACTACATCCTCATTGTCAA GTGGGGTGACGAAAGTGTCCCTGGAAGCCCCTTCAAAGTCAAGGTCCCTTGAATCCCAAAAGTGCCTCCCCAGCC ACAGAATCAGACACTACAAACACCTGCCTTGGGGGTGAAGTGAAGGCCCAGCCTCCCCACCCCACCGCGCCCCAG CTCAGGGGCAGAGGCTGGGACACAAGGGGCTGGCGAGGCTGCGAGGCCAGGGAAGCCCTGAGTTTCTGGCGGGG $\verb|CTGAGCAGTGGGGGAGCATTGTTGTGGGTGTCTGTGTGAGGTCACCCTCAAACTGCACCGCCGGCCAGATA| \\$ CCCTCCTGACCCCGAGGACTTGGTCTGGTCTCTCTGGTGGCTACAACCCCAGAGTTTTAAGGACTTGGAAAGGAA AGCACAATCAGAGAAAAAACAGCCCCCGAACCAGCAGGAGTGGCCTGGCACATGGACCGGCCTGAGCGATGTGC $\tt CTGCCCCATGGGGGGCCTTTTTTACACACTGCGAGGCCCAGCTTTCTAGGGGACTTTTGCACATGTCATGCAGCT$ CAGCTGGGAGCTGCTTAGGTGGAAAACTCCAAATAAAGTGCGGCTGTCGC

 $\label{thm:mapgnylia} $$ MAPGNYLIAIKYGGPQHIVGSPFKAKVTGPRLSGGHSLHETSTVLVETVTKSSSSRGSSYNSIPKFSSDASKVVT \\ RGPGLSQAFVGQKNSFTVDCSKAGTNMMVGVHGPKTPCEEVYVKHMGNRVYNVTYTVKEKGTTSLSSSGVTKVS \\ LEAPSKSRSLESQKCLPSLSPHLQPNTHYIHTHTTNVPHPDTHTQNQTLQTPALGVK$

2620/6881 FIGURE 2409A

GGAGGCGGGGCCGACCAAGAGCAGGAGCTGGAGTCTGAGCCGGTGGTTGCAGCGGAGGCGGTG<u>ATG</u>TCGGTGCAG GTTGTGTCAGCCGCGGCTGCCCCAAGGTGCCTGAGGTGGAGCTGAAGGACCTGAGCCCCTCCGAGGCGGAGTCG CCCGCCGGAGCGGCCCCCGGTCCCGGCCCGGGCTCGGGGCCGCCGCTCTCAGCCCCGCCGGCAAG GTGCCTCAGGCGTCGGCCATGAAGCGGAGCGACCCACATCACCAGCACCAGCGGCACCGCGACGGCGAGGCC CTGGTCAGCCCGACGGCACCGTCACCGAGGCGCCGCACAGTCAAGAAGCAGATCCAGTTTGCTGACCAGAAG CAAGAATTCAACAAACGTCCCACCAAAATTGGACGTCGCTCTTTGTCTCGTTCCATTTCTCAGTCATCTACTGAC AGCTACAGCTCAGCGGCTTCATATACAGATAGCTCTGATGATGAGACATCGCCCAGGGACAAGCAGCAAAAAGAAC TCTAAGGGAAGCAGTGACTTCTGTGTTAAGAACATCAAACAGGCAGAGTTTGGACGAAGAGAAATTGAAATTGCT GAACAAGAAATGCCTGCATTGATGGCTTTGAGGAAGAGAGCTCAAGGAGAAAAGCCTTTGGCTGGAGCCAAAATC GTGGGTTGCACACACACTGCTCAGACTGCTGTGCTTATGGAAACTCTGGGTGCTCTGGGGGGCCCAGTGCCGA TGGGCTGCCTGCAACATCTATTCCACTCTCAATGAAGTGGCTGCTGCTCTAGCAGAAAGTGGATTTCCTGTTTTT GCCTGGAAGGGAGAGTCAGAAGATGACTTTTGGTGGTGTATCGATAGATGTGTGAATGTGGAGGGCTGGCAGCCA AACATGATCTTGGATGATGGAGGGGATCTTACCCACTGGATTTATAAAAAGTATCCCAACATGTTTAAGAAAATC AAGGGCATAGTAGAGGAGAGTGTTACTGGAGTTCACAGGCTGTACCAACTGTCCAAAGCTGGGAAGCTGTGTGTT CCAGCCATGAATGTCAATGACTCAGTCACCAAACAGAAATTTGACAACCTCTACTGTTGCCGTGAATCAATTCTT GATGGACTTAAAAGGACAACAGACATGATGTTTGGTGGAAAGCAAGTGGTAGTCTGTGGCTATGGAGAGGTGGGG CAAGCCTGTATGGATGGATTTCGACTGGTGAAATTAAATGAGGTCATCCGACAAGTGGACATTGTTATTACCTGT ACAGGTAACAAGAATGTGGTAACCAGAGAGCACTTGGACCGTATGAAGAATAGCTGCATCGTTTGTAACATGGGA CATTCCAACACAGAGATTGACGTGGCGAGTCTGCGGACACCAGAACTGACCTGGGAGCGAGTGAGATCTCAAGTT GACCATGTGATATGGCCTGATGGCAAGAGGATAGTACTGCTGGCAGAGGGCCGCCTGCTGAACCTTAGCTGCTCC ACAGTGCCTACATTTGTGCTCTCAATCACTGCTACTCCTGGCCTCTTGCCTTGATAGAGCTTTACAATGCTCCT ACCTTTGATGCCCACTTGACAGAGCTGACAGATGAACAGGCCAAGTATCTGGGACTCAACAAGAATGGGCCCTTC ${\tt AAGCCTAATTACTACAGGTAT} \underline{{\tt TAA}} {\tt GTTCCTGTAACTCAAACCAGAATTTTTAAGGAATAGAACTCCAAGCCTTTT}$ TTAGGTTATTTATTAAAATCAAGAATCCTGTGCCTGTAGTGTTGGCCCAGAGTGTGGTTACTGCCCTGAGG GCCATGAAAGCCACAGAGGATGGGCTGAGGAAGGAAAGAATGGGGTTACTGCTCCCAGTGCATCATTTGCATCA TTCCCCATTGACTGAATCCTCAGCAGTGGCCGTTTTTCCTCTTGTCCAGGCTCACGAGTTAGTCCAGGGATTCCA TACTCCCTATTCCCTGGAGTTTTCTGGAATAAATTTTCAGCACCTGCTTTTCTCAGCTTGGCCCTTCCCCGGGTG AGGCCGTTTGGAATTAACATGGCCAGTGTTTCACACAAGATTGGGTTCCCAATCTTGACCATCACTATCACTGCC TGTGCCTACCAGGGGTCTCCTTTCTTACCCAGGACTCCTTTCTTCTCCTTGAATATTTATGTCCATTTTAACACT TCCTGGTTGCAAGAGGGATGTGCCTCCATTATTTCCTCCACAGTTTTGGTATTTGTCAGACATTTGTTCTGCTGT CTTTCTAATCCAGCCAACGTCTGCTCAGGAAGTGGGGCCAGCTCCACTGGGACCCATAGTTTTACTTCCTTGTCA TTTGATTGGATAGTTTCCAAGGAAGCCCCTCCAGATTGGCACTATCTCAGAAAAGGAGAGCTTGTTGTGAAACAC TGCTTCCTGAAACTTCCTGCTATTGCCTAAAGCTACGTCTGAAACTGAGTAGGGAAAGGCATACTTTTCCAGGGA CTTAGGGGGATAGGCTTTGGAAATGGGACAGGTCTTTCAGACTCACAGCTTGATACCCTAACAAAGCAGAGTATA TTTATTTGTTTCCCAGGAAGGCCATTGCAGTTTGACTGGCTGAGGGATACAGAGATGAAATTGTAAACTGTATCC CGAGATCTGCAGTCTGATCTGTGGACTTCTCTGCTGGCATATCTTTTATGATTTAACCTCTTCCATTTGATGATT CTGTATTTCAGAGTCAGTTTCTTGAGTAACTCCAGTGCTACAAAAAGAATTAGTAATGTGGTGTGGGCAGCGTGA CATTTTATGTCCCACCCAAAAATTGGATTCCTTTTGGAGACTGATCTGTTGGTCTCAGGCATTTCATTAGGACCA GATTGGTTCTAAGAGTTAGTCTGGACTGGCCCTAGGAAACTTGAATTAAATAAGCCTCTTCCCCTTACCGATCCT TTTTAACACTCTCAGGTTTGTTTCCCACTTTTTTCCTATGCTGGTCTGCCTCAAAGTCTCAAGACCAAGGT GACTCAAGATAACACCAGACCACGCATGATCACCCAAAACCTTCCCATCCTGATTCTCTTCTTCTACCTCTACCCT CTCCAACTTCTCCTGGTCTTCACATATACTCTCAAAGCTAGTCTGAAAGTGACCTTACTTTCGGAAGTAGGGAAG

FIGURE 2409B

TGGAACTTTGGTAAATGACTGTTTGCCTCATTTAATAGTATACAGGCTCAGCCCATAGACTACAGTTCTTCAGAG GCCATATGTCTCAGCAAGTACTGGTTATATTCTTTTTTTGTAAGGAAGATCATAAATGCTAAAAATTCCACTAAG ${\tt CCATTCAGTTCTTTGCCTACCTAGTCCTGATTTTTGTATTAATTGGTTCCCTTTAGCAAGGGATTCAGAT}$ CCAAAAATCATAACCTGCTGTTTCTCAGCAAAGCCTTGCTCTCTGGAGCTTACTATGTGCTGGTACTTAAAGAGT ACATTCTGCCTTGCTGTAGTGAAGAGACCCACTCCAAATAAAAAAGGGGCCCACACGGGGCTTCTAAGTTAGGTTG CCAGTGTTGCTGCCCATGATGAGTTATTTGCCTCTGAGTTTCAGATGACCTCTCTGTAGGGACACTGTGTTATCA ACCATTAAGAAGAAGAACCACAAGCCTCCCAAGTATTTGGGTTCTATCTTAGGGTTGAAATCTGGTCATTATTC CCTCTACCCTTGGAATCAGAGCAATGTGTCTTCTTTCCTCCAACCTCTTACCTTAGATGCATCCTGGTTATCTGG AAGCATGGGAAAGAAGGCTACTTATCTCTTTGTATGTGGCTCCAGTCTGTGAGGATACATAACATTTTCTCTACA CCAGGCTGGTCTCAAACTCCTGGGCTCAAGCAATCCTCCTGCCTCAGCTTCCTGAGTAGCTGGAACCACAGGTGT GTGCTACCGTGCCTGGCACTTTTTTGCCTTCTTAATGGAGATATTCAGTTTTCTTTTTTTCATTTAAACAAAGAA AAAAATGTATCTACTCTACCTTCCCTCTCCTCCCTCCCTATCCTACTTGCCCATATGAGCACGGCTCCC CATGGCCACATACTCCTGCAAAGCTTTTATGCTGCTTCGCTTTTCTCTAAACAGATCTGATATTGCTGCTCCTGT GGTTTTCTCAAAATTAACTTTGCCGTGGTTTTTAAAAAGGAATCAAAATGCATTGTTGCATTAAGCTTTTTCAAT TATATATATATATATATATATATATATATATATACGTAATCATCTAGTTCTGTCATCTTACTGAAAGGAATAACACTTC TAAAGATCACCATTTCTGAGAAGTTCTTGGAAATCTTTATGTCTAAGTGATTGTATTAGATCAGCAATAATGACT ATGTAATCTCAAAAAACAAATAAAATATTCTTAACATGG

MSVQVVSAAAAAKVPEVELKDLSPSEAESQLGLSTAAVGAMAPPAGGGDPEAPAPAAERPPVPGPGSGPAAALSP
AAGKVPQASAMKRSDPHHQHQRHRDGGEALVSPDGTVTEAPRTVKKQIQFADQKQEFNKRPTKIGRRSLSRSISQ
SSTDSYSSAASYTDSSDDETSPRDKQQKNSKGSSDFCVKNIKQAEFGRREIEIAEQEMPALMALRKRAQGEKPLA
GAKIVGCTHITAQTAVLMETLGALGAQCRWAACNIYSTLNEVAAALAESGFPVFAWKGESEDDFWWCIDRCVNVE
GWQPNMILDDGGDLTHWIYKKYPNMFKKIKGIVEESVTGVHRLYQLSKAGKLCVPAMNVNDSVTKQKFDNLYCCR
ESILDGLKRTTDMMFGGKQVVVCGYGEVGKGCCAALKAMGSIVYVTEIDPICALQACMDGFRLVKLNEVIRQVDI
VITCTGNKNVVTREHLDRMKNSCIVCNMGHSNTEIDVASLRTPELTWERVRSQVDHVIWPDGKRIVLLAEGRLLN
LSCSTVPTFVLSITATTQALALIELYNAPEGRYKQDVYLLPKKMDEYVASLHLPTFDAHLTELTDEQAKYLGLNK
NGPFKPNYYRY

AGTTCCTGGTCCAGAACTTTACACAGAAAAGGTGCTCAAAGGATATTTGTTTA<u>ATG</u>AATGTGGTATGCTGACATT TAAACAGGACAAAACTTGTAGAACTTCATGGAGGAACACGGAGTGACCCAAACCGAACATATGGCTACCATAGAA GCACATGCAGTGGCCCAGCAAGTGCAGCAGGTCCATGTGGCTACTTACACCGAGCATAGTATGCTGAGTGCTGAT GAAGACTCGCCTTCTCCCCGAGGACACCTCTTACGATGACTCAGATATACTCAACTCCACAGCAGCTGATGAG GCCACGTTAGATGAATATACTACTCGTGTGGGACAGCAAGCTATTGTCCTCTGTATCTCACCCTCCAAACCTAAC CCTGTCTTTAAAGTGTTTGGTGCAGCACCTTTGGAGAATGTGGTGCGTAAGTACAAGAGCATGATCCTGGAAGAC CTGGAGTCTGCTCTGGCAGAACACGCCCCTGCGCCACAGGAGGTTAACTCAGAACTGCCGCCTCTCACCATCGAC GGAATTCCAGTCTCTGTGGACAAAATGACCCAGGCCCAGCTTCGGGCATTTATCCCAGAGATGCTCAAGTACTCT ACAGGTCGGGGAAAACCAGGCTGGGGGAAAGAAAGCTGCAAGCCCATCTGGTGGCCTGAAGATATCCCCTGGGCA AATGTCCGGAGTGATGTCCGCACAGAAGAGCAAAAGCAGAGGGTTTCATGGACCCAGGCACTACGGACCATAGTT AAAAACTGTTATAAACAGCATGGGCGGGAAGACCTTTTGTATGCCTTTGAAGATCAGCAAACGCAAACACAGGCC ACAGCCACACATAGTATAGCTCATCTTGTACCATCACAGACTGTAGTCCAGACTTTTAGTAACCCTGATGGCACT GTCTCACTTATCCAGGTTGGTACGGGGGCAACAGTAGCCACATTGGCTGATGCTTCAGAATTGCCAACCACGGTC ACCGTTGCCCAAGTGAATTATTCTGCCGTGGCTGATGGAGAGTGGAACAAAATTGGGCCACGTTACAGGGAGGT GAGATGACCATCCAGACGACGCAGCCATCAGAGGCCACCCAGGCGGTGGCATCGTTGGCAGAGGCCGCAGTGGCA GCTTCTCAGGAGATGCAGCAGGGAGCTACAGTCACTATGGCGCTTAACAGCGAAGCTGCCGCCCATGCTGTCGCC ACCCTGGCTGAGGCCACCTTACAAGGTGGGGGACAGATCGTCTTGTCTGGGGAAACCGCAGCAGCCGTCGGAGCA CTTACTGGAGTCCAAGATGCTAATGGCCTCTTTATGGCAGATCGTGCAGGTCGCAAGTGGATCCTGACTAAA GCCACAGGCCTGGTCCAGATCCCTGTGAGCATGTACCAGACTGTGGTGACCAGCCTCGCCCAGGGCAACGGACCA GTGCAGGTGGCCATGGCCCCTGTGACCACCAGGATATCAGACAGCGCCAGTCACCATGGACGGCCAAGCTGTGGAG GTGGTGACATTGGAACAGTGACATACAGCCATATTATGGCATCGTTTTCTAGTCTACTTCAAAATTTTTTACACG AAAGGAAGAAGCGGATTTTGGAATTGCATTTTTTAAAGCACCACTCTTGATTTTCTGGGATTGGTGAAGAAACT TATATATATATATATATATATATATATGTATGAAACCCGCATGGAATTATCTGTATGAAATCAAGGTGCGCTG TGGAAACAATAATTCACCCAGTTTAGTGGGTGGTAGGGTACGTGGCCAGACACAGTCACCCAGTTTTTGTTCATA CCAGGGTCATGCGTTGAGCTACTGACAAACTCAGGCGGAGGTGACCATGCCCTTCACCAAAGCTGCCTCCCAGTG CAAGGTCCAGGGACTGCGTGGTCTGCCAGCTGAGATGCTCCTCGGGCTGGCCCAGGTGCTGACCTTGCCACAGGC AGATGAATGTCTTGAAAGCTCCCGGGCCTCAGCCTCCCATCTCCTCTCCTCCCAGGAATCCTTGATCTCATGAC TATTAAAATGTTGCTCTGGTTTTAAGGTCAGTCCTGAATTGCTCGTATATATGAACTGAAGGTAACCGAAGTATT GCGGGGCAGTGGAAGGAAGGAAGGAAAGAAAAATCGTCCTAGACCAGGATACACCCGTGGGAGCAATTTTCT CTACTGTCTGTAGCTTCACAGAGGAGGCGCTGGAATGAACAAGAAGAGACATCTGGTCTGTGGCCACAGCACCCT ACACCTGGCCATAGAAAACAGCTGAGGGTGTTTGCTGTTTCCTGGATCAGGCCCTGCTTCAGAAGGGACTCCTG GAGGCCCATGTTCCTTGATGCAACCTCGTGGCCCAGGCCGGGAGCAGCTTGCCTCCTCAGAGGTGTTGACTATCT GGGTGTTCTTGGTAAC

MEEHGVTQTEHMATIEAHAVAQQVQQVHVATYTEHSMLSADEDSPSSPEDTSYDDSDILNSTAADEVTAHLAAAG PVGMAAAAAVATGKKRKRPHVFESNPSIRKRQQTRLLRKLRATLDEYTTRVGQQAIVLCISPSKPNPVFKVFGAA PLENVVRKYKSMILEDLESALAEHAPAPQEVNSELPPLTIDGIPVSVDKMTQAQLRAFIPEMLKYSTGRGKPGWG KESCKPIWWPEDIPWANVRSDVRTEEQKQRVSWTQALRTIVKNCYKQHGREDLLYAFEDQQTQTQATATHSIAHL VPSQTVVQTFSNPDGTVSLIQVGTGATVATLADASELPTTVTVAQVNYSAVADGEVEQNWATLQGGEMTIQTTQA SEATQAVASLAEAAVAASQEMQQGATVTMALNSEAAAHAVATLAEATLQGGGQIVLSGETAAAVGALTGVQDANG LVQIPVSMYQTVVTSLAQGNGPVQVAMAPVTTRISDSAVTMDGQAVEVVTLEQ

GCCTCAAGAGGCGGATATTAACCTCCCAGGACGGAAGTTCCGGAGCCTTCAAACTCTCGGGGAAGCAACTCGGCA GCGGACCAAGATGGCGCCCCTGTGAGGGACAAGCGTTTGCCGTAGGGGTTGAAAAGAATTGGGGTGCAGTAGT TCGCTCCCAGAAGGGACCCCCCAGAAAATCCGGCAGCTGATAGATGAGGGGATTGCCCCGGAAGAGGGGAGGCGT GGACGCGAAGGACACGTCTGCCACATCCCAGTCAGTTAATGGATCACCCCAAGCGGAACAACCTTCATTGGAATC TACAAGCAAAGAAGCCTTCTTTAGCAGAGTGGAAACATTTTCTTCTTTGAAATGGGCAGGTAAGCCCTTTGAGCT GTCTCCACTCGTCTGTGCAAAATATGGCTGGGTCACAGTGGAATGTGATATGCTCAAGTGCTCTAGCTGTCAAGC TTTTCTCTGTGCCAGTTTACAACCAGCTTTTGACTTTGACAGATATAAGCAACGATGTGCTGAGCTGAAGAAAGC CTTGTGTACTGCCCATGAGAAGTTCTGTTTCTGGCCAGACAGCCCATCCCCAGACCGATTTGGGATGTTGCCCCT GGATGAGCCTGCTATTCTTGTTAGTGAATTCCTAGATCGTTTTCAAAGCCTTTGTCACTTGGACCTCCAGCTTCC AGATGAACTTGATCACCGAACTGATGAGAGAAAAACTACAATCAAATTAGGCTCAGACATCCAAGTCCACGTCAC TGCCTGTATTCTCTCTGTGTGTGGCTGGGCGTGTAGTTCCTCTTTGGAATCCATGCAGCTCTCCCTGATAACATG CTTTGGCCTGACCAGCTCCCCAATCCCAGGCCTTGAGGGGCGACCAGAGCGCTTACCTCTGGTGCCTGAATCTCC TCGGAGGATGATGACCCGGAGCCAGGATGCCACTTTCTCCCCAGGCTCAGAGCAGGCTGAAAAGAGCCCTGGTCC CATTGTCTCTCGAACTCGGAGCTGGGACTCTTCCAGTCCTGTTGACCGTCCTGAGCCAGAGGCTGCTAGCCCCAC CACCAGAACTCGCCCAGTGACCCGAAGCATGGGAACAGGAGACACCCCTGGCCTGGAGGTACCATCTAGCCCTCT GCGGAAAGCCAAGCGAGCTCGCCTCTGCTCCTCCAGCAGTTCGGACACTCTTCCCGAAGCTTCTTTGATCCCAC ACCAGATGCCAGCGCCCCAGCAGAGCCAGGCTGGAAAGCAGTGCTGACCATCCTCTTGGCGCACAAACAGTCTAG CCAGCCAGCTGAAACGGACTCCATGAGTCTCTCTGAGAAATCAAGGAAAGTATTCCGAATATTTCGGCAGTGGGA ATCTCTGTGCTCATGCTGAAGATACTCCAGCGCCTTCCTGGAGATAGCTGGAATGAGAGTGACTTTTTGAAAAAT TAAGGCTGAGTTCCTTTCGGTCAGCTGACACTAAGTTTTTCCTGTTCTGGGTTAATCATAAGGAGCCCCCTGCCA TAGCAAAGGCAGTGAGTGTCAACTATCTGCATCTGGCTGAGAGAGCCCGTTTCCTTTCAGGGATGTGGACAGGG CCATTTCAGCATCTTCAATGTGGAGCAGTGTTCTGAGGACTCTTCTATCCTAGGACTATGACAGTGTGTATTAAT **AAAATATTTGCTAAGATTCTCA**

GGCGCTGACGCCTGGCAGGGAGAAGGCGGCAGCACATGCTGGGCTCGGGGGCGATGGGCTTGTGCGCGGACCTGG CGACGCTCTAGCCCCGAGCCGCTATTCGTGGCCGGGTCCTCCCTGGGAACAGGGTGAAGGCCGAGAACCTCTGG CCTCAGGAAGCGCATGCGCAACCGGTTCTCCGAAACATGGAGTCCTGTAGGCAAGGTCTTACCTGAATCAGGATG

GACTCTGTGGGTGTGGTTGGAAGTCCAGAGATAGTTGTGCTTTTACACGGTTTTCCAACATCCAGCTACGACTGG GACAAACCGAGACCACATCACTATTCCATATTTGAGCAGGCCAGCATCGTGGAAGCGCTTTTGCGGCATCTGGGG CTCCAGAACCGCAGGATCAACCTTCTTTCTCATGACTATGGAGATATTGTTGCTCAGGAGCTTCTCTACAGGTAC CGTCCACTCCTTCTCCAAAAGCTACTCAAAGATGGAGGTGTGCTGTCACCCATCCTCACACGACTGATGAACTTC TTTGTATTCTCTCGAGGTCTCACCCCAGTCTTTGGGCCGTATACTCGGCCCTCTGAGAGTGAGCTGTGGGACATG GTAAATCCCTATCCAGAGTTTTTGGAGCTGTACAGGAAAACGCTGCCGCGGTCCACAGTGTCGATTCTGGATGAC CACATTAGCCACTATCCACAGCTAGAGGATCCCATGGGCTTCTTGAATGCATATATGGGCTTCATCAACTCCTTC TGAGCTGGAAAGAGTAGCTTCCCTGTATTACCTCCCCTACTCCCTTATGTGTTGTATTCCACTTAGGAAGAAA TGCCCAAAAGAGGTCCTGGCCATCAAACATAATTCTCTCACAAAGTCCACTTTACTCAAATTGGTGAACAGTGTA TAGGAAGAAGCCAGCAGGAGCTCTGACTAAGGTTGACATAATAGTCCACCTCCCATTACTTTGATATCTGATCAA ATGTATAGACTTGGCTTTGTTTTTTGTGCTATTAGGAAATTCTGATGAGCATTACTATTCACTGATGCAGAAAGA CGTTCTTTTGCATAAAAGACTTTTTTTTAACACTTTGGACTTCTCTGAAATATTTAGAAGTGCTAATTTCTGGCC CACCCCCAACAGGAATTCTATAGTAAGGAGGAGGAGAAGGGGGGCTCCTTCCCTCTCCTCGAATGACGTTATGGG ${\tt CACATGCCTTTTAAAAGTTCTTTAAGCAACACAGAGCTGAGTCCTCTTTGTCATACCTTTGGATTTAGTGTTTCA}$ TCAGCTGTTTTTAGTTATAAACATTTTGTTAAAATAGATATTGGTTTAAAATGATACAGTATTTTAGGTATGATTT AAGACTATGATTTACCTATACATTATATATTTTATAAAGATACTAAACCAGCATACCCTTACTCTGCCAGAGT AGTGAAGCTAATTAAACACATTTGGTTTCTGAATAAATTGAACTAAATCCAAACTATTTCCTAAAATCACAGGAC ATTAAGGACCAATAGCATCTGTGCCAGAGATGTACTGTTATTAGCTGGGAAGACCAATTCTAACAGCAAATAACA GTCTGAGACTCCTCATACCTCAGTGGTTAGAAGCATGTCTCTCTTGAGCTACAGTAGAGGGGAAGGGATTGTTGT GTAGTCAAGTCACCATGCTGAATGTACACTGATTCCTTTATGATGACTGCTTAACTCCCCACTGCCTGTCCCAGA ATTATTAAGTGATTATTTAAAATTCGTTTTTTTAAATTAGCAACTTCAAGTATAACAACTTTGAAACTGGAATAA GTGTTTATTTCTATTAATAAAAATGAATTGTGAC

WO 2004/030615

MREWWVQVGLLAVPLLAAYLHIPPPQLSPALHSWKSSGKFFTYKGLRIFYQDSVGVVGSPEIVVLLHGFPTSSYD WYKIWEGLTLRFHRVIALDFLGFGFSDKPRPHHYSIFEQASIVEALLRHLGLQNRRINLLSHDYGDIVAQELLYR YKQNRSGRLTIKSLCLSNGGIFPETHRPLLLQKLLKDGGVLSPILTRLMNFFVFSRGLTPVFGPYTRPSESELWD MWAGIRNNDGNLVIDSLLQYINQRKKFRRWVGALASVTIPIHFIYGPLDPVNPYPEFLELYRKTLPRSTVSILD DHISHYPQLEDPMGFLNAYMGFINSF

TGCTTGTACCTAGAAGGGAGACGAGGAAACACACATGTAGCTGAGCAAACTTAAACCAGTGCACCGCTGAAAACG AGAGAAAAAGGATACAAACAGTCCAGAAACAATGTACTTTCCTAGCATCATAAGCTGAAGTCTGAAGCTCCACTG $\verb|CTCCTGCCCTTCCCTTTCACCAGACCTACAGTTGCACAGGAGCTTCAGCCCTATCTTGGCTTAACAGACTTCCAT|\\$ AAAGAGAAAACGCCATGAAACTACCACAGGTCCCACAGATGATCCTCTTGGAAAATGCTTTATTCCTGGTAATTA ATCCCTGTTGAGGGAGGGTAACTTGGCAGTGATCCCTTCCAGAGTGCCAAGGAGTTGTTTATTCCCTTCAGTAAA TAAGGAACAGTTCAACATTTAATGTTTTTTTAAAAGCAATTCAAATGTGCAAGAGCCTTCTGGTGCTGACAACAA TGAAGTGCAGTGGTGCAATCTCAGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGCGATTCTCCTGCCTCAGCCT $\tt CCCAAGTAGCTGGGATTACAGGCTTGTGCCACCATGCCTGGCCAATTTTTATACTTTTAGTAGAGATGGGGTTTT$ GCCATGTTGGCCTGGCTGACCTCAAACTCCTGACCTCAGGTCATCCTCCCACCTCAGCCTCCCAAAGTGCTAGGA GGAAGAAGGAAAGTACAATCAATTATGCCAAATCCCTATAAAAATAACCTCGAAGATGTTAAAAATCTAAGTAATC TGATACAAAGAACAAGCAACTGTGACCAAATTGACATTAAAATGACACAATTATTTGTAAAATGTAAGCTTAACT GCGTTAGGTGAGAACAGGCCTTTTCTCCTTTCAATCTGTATATTAAAACATTGTAAAAATCATGCTATGTGAAAA TACTTGAAGGCACCTTGTTTACTTTCACCTAGGTGTTTTTAAACAGCATCTCCCCATTTCTCCTTTTGTTCTGTA ATATGCAAATTTTTTCAGTGAAAAGTAAATTTTCAGTTAAAAGCATATGATCACAACACATAAACTACAAATTCT TTGTACTTTATCATGAATGGCCTCACAGAAATTCTCTAAGATACAGCAACTATTCCCCAAGGAACACCTTTAGCTT ATGCTGTTTGCTCAGCACTTTTTATTCAGCAGGAGACCCAATCTAACATCAAAAACATAATAAAACTATTACAAA ATCCTGTCAACTATAAAAAGGGCTTAATCAACATAAACATGAACTTTTTTAATGCATATGACATATGGAAGCAT TCAGCATCATCTAAATTAGGTAAACATTTAGACAATATTAACCTTGCTAATAGTATGGGATTAGAACAGGTATAT TCATATACTGCCAGTGACATGAAAATTTGGTAATAAGGTTTTCAAAAATAATTTAGAAGCAGTTAAAAATTGTAT ATACTTTAGCCTAAGAGTTTTGTTCTTGAGAATCTGTGCAAATAAAATCATTCCATTTATACAAGTAGTATAGTT TGAAAATGTAAGGAAAAAATAAACTGTATGGACATGAAGCTTTTACTTCAACATTAGTTTTCTAAAAACAGTAAAA GAGCAATAATGAAAAACGGTTTATGACAAACATTTTTCGTTATTGCTCTTGACCCCCGCTCAAAACAAATCATTT CCAATCTGTTTCTCAGTTTCTCACCTATAAAATGAGGTTAATGGCACCTATCTCCAAATGCTGTTGTAAAGATT AAACAATGAAGGCTGAAAACATAACTCAGTGCCTGGCATATGGTAATTACTTGATAAGTAGTGGTCATAATAATC ATCATCACTAGCAAATTAATTTATATATAGGTATCAAGACTTAAATCACAGTTACACTACAAATAATCTACAGAA AAAATGAAATCAGGGATGGTAAGGAGAGAGAACCAATGGTGGTTATATCTATTAATATTTTATATATTACCTGAC AGGTTGCTC

 ${\tt MVPSQADVAVFEAVSGPPPADLCHALRWYNHIKSYEKEKAGLPGVKKALSKYGPADVEDTTGSGATDSKDDDDIDLFGSDYEEESEEAKRLREEHLAQYESKKANDETDMAKLEECVRSIQADGLVWGSSKLVPVGYGIKKLQIQCVVEDDKVGTDMLEEQITAFEDYVQSMDVAAFNKI$

CTTTCTTTGCGGAATCACCATGGCGGCTGGGACCCTGTACACGTATCCTGAAAACTGGAGGGCCTTCAAGGCTCT CATCGCTGCTCAGTACAGCGGGGCTCAGATCCGCGTGCTCTCCGCACCACCCCACTTCCATTTTGGCCAAACCAA $\tt CCGCACCTCTGAATTTCTTCGCAAATTTCCTGCCGGCAAGGTCCCAGCATTTGAGGGTGATGATGGATTCTGTGT$ GTTTGAGAGCAACGCCATTGCCTACTATGTGAGCAATGAGGAGCTGCGGGGAAGTACTCCAGAGGCAGCCCA CATCATGCACCACAACAAACAGGCCACTGAGAATGCAAAGGAGGGAAGTGAGGCGAATTCTGGGGCTGCTGGATGC TTACTTGAAGACGAGGACTTTTCTGGTGGGCGAACGAGTGACATTGGCTGACATCACAGTTGTCTGCACCCTGTT GTGGCTCTATAAGCAGGTTCTAGAGCCTTCTTTCCGCCGGGCCTTTCGCAATACCAACCGCTGGTTCCTCACCTG CATTAACCAGCCCAGTTCCGGGCTGTCTTGGGGGAACTGAAACTGTGTGAGAAGATGGCCCAGTTTGATGCTAA GCTGGCTGCTGAGCCCAAGGCCAAGGACCCCTTCGCTCACCTGCCCAAGAGTACCTTTGTGTTGGATGAATTTAA ${\tt GCGCAAGTACTCCAATGAGGACACACTCTCTGTGGCACTGCCATATTTCTGGGAGCACTTTGATAAGGACGGCTG}$ AATGTTCCAGCGACTGGACAAGCTGAGGAAGAATGCCTTCGCCAGTGTCATCCTTTTTGGAACCAACAATAGCAG $\verb|CTCCATTTCTGGAGTCTGGGTCTTCCGAGGCCAGGAGCTTGCCTTTCCGCTGAGTCCAGATTGGCAGGTGGACTA| \\$ GGAGGGGGCCTTCCAGCATGTGGGCAAAGCCTTCAATCACGGCAAGATCTTCAAGTGAACATCTCTTGCCATCAC CTAGCTGCCTGCACCTGCCCTTCAGGGAGATGGGGGTCATTAAAGGAAACTGAACATTG

MAAGTLYTYPENWRAFKALIAAQYSGAQIRVLSAPPHFHFGQTNRTSEFLRKFPAGKVPAFEGDDGFCVFESNAI
AYYVSNEELRGSTPEAAAQVVQWVSFADSDIVPPASTWVFPTLGIMHHNKQATENAKEEVRRILGLLDAYLKTRT
FLVGERVTLADITVVCTLLWLYKQVLEPSFRRAFRNTNRWFLTCINQPQFRAVLGELKLCEKMAQFDAKKFAETQ
PKKDTPRKEKGSREEKQKPQAERKEEKKAAAPAPEEEMDECEQALAAEPKAKDPFAHLPKSTFVLDEFKRKYSNE
DTLSVALPYFWEHFDKDGWSLWYSEYRFPEELTQTFMSCNLITGMFQRLDKLRKNAFASVILFGTNNSSSISGVW
VFRGQELAFPLSPDWQVDYESYTWRKLDPGREETQTLVREYFSWEGAFQHVGKAFNHGKIFK

GAAGGCCGCACCGTACTGGGCGGGGGTCTGGGGAGCGCAGCAGCCATGCCAAGCCGTCTCCTGCTCAACAACGGC GCCAAGATGCCCATCCTGGGGTTGGGTACCTGGAAGTCCCCTCCAGGGCAGGTGACTGAGGCCGTGAAGGTGGCC ATTGACGTCGGGTACCGCCACATCGACTGTGCCCATGTGTACCAGAATGAGAATGAGGTGGGGGTGGCCATTCAG GAGAAGCTCAGGGAGCAGGTGGTGAAGCGTGAGGAGCTCTTCATCGTCAGCAAGCTGTGGTGCACGTACCATGAG ${\tt AAGGGCCTGGTGAAAGGAGCCTGCCAGAAGACACTCAGCGACCTGAAGCTGGACTACCTGGACCTCTACCTTATT}$ CACTGGCCGACTGGCTTTAAGCCTGGGAAGGAATTTTTCCCATTGGATGAGTCGGGCAATGTGGTTCCCAGTGAC ACCAACATTCTGGACACGTGGGCGGCCATGGAAGAGCTGGTGGATGAAGGGCTGGTGAAAGCTATTGGCATCTCC GAGTGCCACCCATATCTCACTCAGGAGAAGTTAATCCAGTACTGCCAGTCCAAAGGCATCGTGGTGACCGCCTAC AGCCCCTCGGCTCTCCTGACAGGCCCTGGGCCAAGCCCGAGGACCCTTCTCTCTGGAGGATCCCAGGATCAAG GCGATCGCAGCCAAGCACAATAAAACTACAGCCCAGGTCCTGATCCGGTTCCCCATGCAGAGGAACTTGGTGGTG ATCCCCAAGTCTGTGACACCAGAACGCATTGCTGAGAACTTTAAGGTCTTTGACTTTGAACTGAGCAGCCAGGAT ${\tt ATGACCACCTTACTCAGCTACAACAGGAACTGGAGGGTCTGTGCCTTGTTGAGCTGTACCTCCCACAAGGATTAC}$ $\tt CCCTTCCATGAAGAGTTT{\color{red}{\textbf{TGA}}} \\ AGCTGTGGTTGCCTGCTCCCCAAGTGACCTATACCTGTGTTTCTTGCCTCA$ TTTTTTCCTTGCAAATGTAGTATGGCCTGTGTCACTCAGCAGTGGGACAGCAACCTGTAGAGTGGCCAGCGAGG GCGTGTCTAGCTTGATGTTGGATCTCAAGAGCCCTGTCAGTAGAGTAGAAGTCTCTTCCAGTTTGCTTTGCCCTT CTTTCTACCCTGCTGGGGAAAGTACAACCTGAATACCCTTTTCTGACCAAAGAGAAAGCAAAATCTACCAGGTCAA ${\tt AATAGTGCCACTAACGGTTGAGTTTTGACTGCTTGGAACTGGAATCCTTTCAGCAAGACTTCTCTTTGCCTCAAA}$ TAAAAAGTGCTTTTGTG

MASRLLLNNGAKMPILGLGTWKSPPGQVTEAVKVAIDVGYRHIDCAHVYQNENEVGVAIQEKLREQVVKREELFI VSKLWCTYHEKGLVKGACQKTLSDLKLDYLDLYLIHWPTGFKPGKEFFPLDESGNVVPSDTNILDTWAAMEELVD EGLVKAIGISNFNHLQVEMILNKPGLKYKPAVNQIECHPYLTQEKLIQYCQSKGIVVTAYSPLGSPDRPWAKPED PSLLEDPRIKAIAAKHNKTTAQVLIRFPMQRNLVVIPKSVTPERIAENFKVFDFELSSQDMTTLLSYNRNWRVCA LLSCTSHKDYPFHEEF

GGCACGAGGCCTGAGCTCAGGAGTTTGAGACCAGCCTGTCTCTACTAACAATATAAAAATTAGCTGGGAGTCACG GTGGGCGCCTGTAATCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGACAGAGGTTGTA GTGAGCTGAGATCGCACCACTGCACTCTAGCCTTGGCAACAGTGCAAGACTGTCTCAAAAAACAGCAACAGAGAGC CAAAGCCAAGATGCCCATTGTGGGGCCTGGGCACTTGGAAGTCTCCTCTTGGCAAAGTGAAAGAAGCAGTGAAGGT GGCCATTGATGCAGGATATCGGCACATTGACTGTGCCTATGTCTATCAGAATGAACATGAAGTGGGGGAAGCCAT ${\tt CCAAGAGAAGATCCAAGAGAAGGCTGTGAAGCGGGAGGACCTGTTCATCGTCAGCAAGTTGTGGCCCACTTTCTT}$ TGAGAGACCCCTTGTGAGGAAAGCCTTTGAGAAGACCCTCAAGGACCTGAAGCTGAGCTATCTGGACGTCTATCT TATTCACTGGCCACAGGGATTCAAGTCTGGGGATGACCTTTTCCCCAAAGATGATAAAGGTAATGCCATCGGTGG AAAAGCAACGTTCTTGGATGCCTGGGAGGCCATGGAGGAGCTGGTGGATGAGGGGCTGGTGAAAGCCCTTGGGGT CTCCAATTTCAGCCACTTCCAGATCGAGAAGCTCTTGAACAAACCTGGACTGAAATATAAACCAGTGACTAACCA GGTTGAGTGTCACCCATACCTCACACAGGAGAAACTGATCCAGTACTGCCACTCCAAGGGCATCACCGTTACGGC $\verb|CTACAGCCCCTGGGCTCTCCGGATAGACCTTGGGCCAAGCCAGAAGACCCTTCCCTGCTGGAGGATCCCAAGAT|\\$ TAAGGAGATTGCTGCAAAGCACAAAAAAAACCGCAGCCCAGGTTCTGATCCGTTTCCATATCCAGAGGAATGTGAT TGTCATCCCCAAGTCTGTGACACCAGCACGCATTGTTGAGAACATTCAGGTCTTTGACTTTAAATTGAGTGATGA GGAGATGGCAACCATACTCAGCTTCAACAGAAACTGGAGGGCCTGTAACGTGTTGCAATCCTCTCATTTGGAAGA GTGTGACTACCTCCACTCATGTCCCATTTTAGCCAAGCTTATTTAAGATCACAGTGAACTTAGTCCTGTTATAGA CGAGAATCGAGGTGCTGTTTTAGACATTTATTTCTGTATGTTCAACTAGGATCAGAATATCACAGAAAAGCATGG CTTGAATAAGGAAATGACAATTTTTTCCACTTATCTGATCAGAACAAATGTTTATTAAGCATCAGAAACTCTGCC

MATFVELSTKAKMPIVGLGTWKSPLGKVKEAVKVAIDAGYRHIDCAYVYQNEHEVGEAIQEKIQEKAVKREDLFI VSKLWPTFFERPLVRKAFEKTLKDLKLSYLDVYLIHWPQGFKSGDDLFPKDDKGNAIGGKATFLDAWEAMEELVD EGLVKALGVSNFSHFQIEKLLNKPGLKYKPVTNQVECHPYLTQEKLIQYCHSKGITVTAYSPLGSPDRPWAKPED PSLLEDPKIKEIAAKHKKTAAQVLIRFHIQRNVIVIPKSVTPARIVENIQVFDFKLSDEEMATILSFNRNWRACN VLQSSHLEDYPFDAEY

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 ${\tt MKAPKRMRMAAVPVAAARLPATRTVYCMNEAEIVDVALGILIESRKQEKACEQPALAGADNPEHSPPCSVSPHTS}\\ {\tt SGSSSEEEDSGKQALAPGLSPSQRPGGSSSACSRSPEEEEEEDVLKYVREIFFS}$

TCCAGTTCCTGATACCAAACCTGGCTAAAAAACTTGAAGAAATTAAAAAGGACTTGGATGCCAAGAAGAAACCCCC CTAGTGCATGAGACTGCCTCCAGCACTGCCTTCAGGATATACTGATTCTACTGCTCTTGAGGGCCTCGTTTACTA TAAAGCAAGCAAAATGGGGCCCCAATTTGAGAACTACCCGACATTTCCAACATACTCACCTCTTCCCATAATCCC TTTCCAACTGCATGGGAGGTTCTAAGACTGGAATTATGGTGCTAGATTAGTAAACATGACTTTTAATGAGTAGTG TCTTCTTTATCGTTTGCGATTTTTACTACCTTTTTTCAAAAGAAAAATTGATGAGTTTTGTATAGCTGGTCAGAT ACAAATAATAGTGACTTCACAGTTTAGTAATTATAATGGGTACTTGTTAAACATTTGGTACTAAATTATGTTGCT CTCTGTAGTTGCTAATTTAACCAATAAGTCAATTTGCTATTCATGAAGAAACGATTCTGAGAATCCTGTCAGGAA TTGGGGAATGAAAAATACACAAAATAATGGTCTTTGTCCCAGTAGAGTTCATAGTCTATTTAGTGTGCATGTTT TTCCTTAATGATGTATTTGATCTGACTTTTTTCCTTCTCAAAAGAATCATACTTGGGATTACAGGTACATTTGAT GTTATATGATGGATAAGTGAAAAGTTTTTAAAGGAGATTTTATACCTTTTCACATTAAAAAAGGTATTTATATTA TTACTTTGTAGTGATTGTCTTAAGAAAAATATAGCCCAAATGTATAGTAAAATCAGCAGCTCAAGAAGAATTTC TGCTTCTCTTTGTAGTTGATGCTTTGTTTTTTCCTGCAGTCAGAAATTCCTTGTATTTGTCAAATGTATAATCAG CTTGTATTGTTTTTAAATTAAAAAAATTTGAATAATTAACTTTTGCCATGGGACAAGATACAAAAGTAATTTCA TATAAAGGGCCTCTCCCACCCCTGTTCTCTGGCTCCTGGCTCCTGTTTGACAAGTTACTGTTACCACTTCGCCTT ATACTTTTGAGAAAGAGTCTGTGCCTAAACAAACACGTGTAACACAAATAGTAACTATACATGGAGGTCTAGCCC TCACCTTTTTTTTTTTTTTTTTTTTTTTTTTTATGGAGATCATTCTATACCAGCATGTAAGTAGCAAGGAACCTCA TTCTTTTTTGGCTGCCTAAAATTTTTTTGAATAGATATAACATAATTGATTTAATCTGCTACTGGTGAATGCTT AGGTTGTTCTTTTGCTATTACAGTGATAACTTCAATCCTAATGTTATTAAGCATATCGATTCAGGGTATAGCTAT AAGATGAAGTCCTAAAAGTATAATTTAGACTAAATACAAATACCCATTTCGCTAGCTGTTTTGTTTCAGAGGACT TGTTGAGCAGCTTCACTAATAATGCCATTTTTGAAGACATGGCAGGTTCAGAATCAATAAACTGGAAGAATTGTT CAGAGCATCTTTTTCAGACAGTGATGACATTGATTCTGTATATGATAAAGTGATTCTGCTTCTCTTTGACAACT ACTCTGCTGCCCAGGCTGGAGTGCAGTGGCACAGTCTTGGCTCACTGCAACTCCTGCCTCCCGGTCCAAGTGATT CTCGTGCTGCAGCTTCTCAAGTAGCTGGCATCACCACCACCACCTGGCTAATTTTTTGTATTTTTAGTAACGACGAG GTTTCACCATGTTGGCAAAGCTGGTCTCAAATTCCTGGCCTCAAGTGATCTGCCCACTTCAGCCTCCCAAAGTGT $\tt TGGGATTACAGGCGTGAGCCACTGCGCCCGGCTTTTTTAAACTTTTAGATTCATTTAATAGGTAAATTGCATGTC$ ACGGGTTTGTAGCTTATTCTTTCAGAAACTCTTGCATTATCTGTAGACGTGGACGTAAATATCCACCTCATAGGG ATTAGTACAAA

CGCGGAGGAGAAGAGGAAGAGGAAGTTGGGGGAGGGTCCTAGCGGGGAGTGAACCGGAAGTGTAAAGGTTCCTGC CCCTGCCTCCCTCTCGCCCGGCGCATCCGCTTGCTGCTGCCACCGCCTCCTCATCTTCTGCCCGGCCAACCGGC $\tt CTGCCCCGCTGCAGTG{\color{red} ATC}{\color{blue} TGCGACAAGGAGTTCATGTGGGCCCTGAAAAACGGAGACTTGGATGAGGTGAAAGA}$ TGGGCAGCTTGAAATCCTGGAATTTCTGCTGCTGAAAGGAGCAGATATTAATGCTCCAGATAAACATCATATTAC TCCTCTTCTGTCTGCTGTCTATGAGGGTCATGTTTCCTGTGTGAAATTGCTTCTGTCAAAGGGTGCTGATAAGAC TGTGAAAGGCCCAGATGGACTGACCGCCTTTGAAGCCACTGACAACCAGGCAATCAAAGCTCTTCTCCAG<u>TGA</u>TG TATCTGCCAGCTTCTCAGCTAAATACTTTAAGAGGGGTGAGGGGAGAGAAATTCATAACAAATCCGACTACC AGAAAAAAAAATTGTTTTGGAGGAGGGGCAAAAGGAACCATGATCAGGCTTTTACTGGGATTCCTGATCAAGTA AGCCTCTTCCCTTTCTAATAAAATATACACCTTATACCCAAGGGAGAGCAAAGACAAAATACACCAGTAACATTT GACCTTTTCAGCTCCCTAGCTAATTTATTAGATTGTGTTGAAGGTCTGATTCTACAAAGGCCAACTCTACATATT TGGTAGCCCTAACTGTCTGAGCAGTAGTGGCTGCTGTGATGTAAACTTAGGGTGCTGAGATAAGCAATTAGCTCT AGCCTTCTGCCTTAAGAATGCACTCTACTGGGGATTTCCTGGCATAGTTAAGAGCGCTGCCTATAAGGTTGGTGA CCAAATCTTTCCTCGGTGACTTTAAGCTTTATGTGAAAGCTTAGTTAAGGTGAGGAGGGGCACACTCCTAAATTG CTGGATGACTTTGGATTTTCTCTCCCCTTTCACATGGATTTCATGTCTCTTTAGATAAAACTGACTAGTT TTCATACATTTATATAGCATTGAAACACTTTCAAACTCCTGCTGGTAGTAAAAGGGGGATTTAAAAAATAGAATCAT AGCCATAAGCCTGTTAGTATCATATGAAGAGAGAACAGTTATCTTAGTACCTATGGATTTTCTTTATTTGCTGTT TGAATGGATTGACCTTGGTTATGTGTTGAGAATTAAGGAACATTCTTTGAAATGCCTCTCTCAGACCCATCTTGG AGGCTGATTACTTACTGCACCAAAGCTATCACTGGGGTGAGATTTACTGTTTGGACAAATTTAGCCCCATCCCTT CAAAAATACACTTGTAACCAGGTTTCCCAGAGTTGTTGATAGGCTTCTGCTGAACATATGCCAACCCACCTGCAT AATATATTTTTGTTGCTTTTATAAATCATGCATTACATAAAGTGTGACAACTTCAAAATGTATTCTCTGTTCTTG TGCATGCAAAATATAAAAAATTTAAATTGTCCTGATTCTATTTTGTAAATGGAGAAACAATCATATCTTTCTAAG CGGTAATGGAGGAAGACTAGTGCTTTGTGCATTTTGATATATTTGAGTTCATTTTTTCCACAATGTCATACTTTT GACGCAGTTGGGTTTCTCATAAGTATCCTAGTTCATGTACATCCGAATGCTAAATAATACTGTGTTTTAAGTTTT GTGTTGCAAGAACAAATGGAATAAACTTGAATTGTGCT

 ${\tt MCDKEFMWALKNGDLDEVKDYVAKGEDVNRTLEGGRKPLHYAADCGQLEILEFLLLKGADINAPDKHHITPLLSA}\\ {\tt VYEGHVSCVKLLLSKGADKTVKGPDGLTAFEATDNQAIKALLQ}$

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 ${\tt AAAGGATGATTCTTTTGGCCATCATTTGGTACAGTCTCATTTCCAAGTCATGTATAATCTTTATGGCTTCCAAGGAAGAATTAAAATACTCTTTTACGT}$

 ${\tt MFRRPVLQVLRQFVRHESETTTSLVLERSLNRVHLLGRVGQDPVLRQVEGKNPVTIFSLATNEMWRSGDSEVYQLGDVSQKTTWHRISVFRPGLRDVAYQYVKKGSRIYLEGKIDYGEYMDKNNVRRQATTIIADNIIFLSDQTKEKE}$

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2656/6881 FIGURE 2444A

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WO 2004/030615 PCT/US2003/028547

2657/6881 FIGURE 2444B

MQFVSTRPQPQQLGIQGLGLDSGSWSWAQALPPEEVCHQEPALRGEMAEGMPPMQAQEWDMDARRPMPFQFPPFPDRAPVFPDRMMREPQLPTAEISLWTVVAAIQAVERKVDAQASQLLNLEGRTGTAEKKLADCEKTAVEFGNHMESKWAVLGTLLQEYGLLQRRLENLENLLRNRNFWVLRLPPGSKGEAPKVPVTFVDIAVYFSEDEWKNLDEWQKELYNNLVKENYKTLMSLDAEGSVPKPDAPVQAEPREEPCVWEQRHPEEREIPMDPEAGAEPLVPAQDASSQVKREDTLCVRGQRGLEERAIPTESITDSPISAQDLLSRIKQEEHQCVWDQQDLADRDIPTDPNSESLISAHDILSWIKQEEQPYPWGPRDSMDGELGLDSGPSDSLLMVKNPPPAPPQPQPQPQPQPQPQDQSQPQPQSLPPIAVAENPGGPPSRGLLDDGFQVLPGERGSGEAPPGGDRSTGGGGGGGGGGGGAEAGTGAGGGCGSCCPGGLRRSLLHGARSKPYSCPECGKSFGVRKSLIIHHRSHTKERPYECAECEKSFNCHSGLIRHQMTHRGERPYKCSECEKTYSRKEHLQNHQRLHTGERPFQCALCGKSFIRKQNLLKHQRIHTGERPYTCGECGKSFRYKESLKDHLRVHSGGPGPGAPRQLPPPPERD

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GCATCGGAACCAGGCCTCCTGGCACTGGCCTGGGTAGAGCCAGGGCGAGCACCAGCTGACCCCCAGTGGAACCCT $\tt GTGACAGTCCTGCCAGGGCCCAGGCCATCCCAACCGACTTCCATCTC{\color{red} \underline{ATG}} GACCCTCCAGCGGAGAAGCCGGGAGA$ AGGCTGGCGGACTGCAGATCACCCCCAGCTGCTGAAGTCACGCACAGGCGAGTTCTCCCTGGAGTCCATCCTGC TACTGAAGCTGCGTGGCTTGGGACTGGCTGACCTGGGCTGGGAGAGTGCCTGGGCCTGGAGTGGCTGGACC ATCGGCTGACGGGCCTGGACCACTGGCCACCTGTGAGAACTTGCAGAGTCTCAATGCCGCAGGCAACCTACTGG GGCTCAGCAACCCGCTCTGTGCCAACCCCTCCTACTGGGCTGCAGTCCGGGAGCTGCTGCCTGGCCTGAAAGTCA TCGACGGTGAGCGTGTATTGGGCGTGGTAGTGAGTTCTACCAGCTGTGCCGAGACCTGGACAGCTCCTTGCGTC CCAGCTCCAGTCCAGGCCCCAGAGCCACGAGGCCCAGCCCTGGGTGGAGCCAGGCTACTGGGAGTCCTGGCCCA **CA**ACGTGGCCTATGGCCCAGGACAGCCTGGCAGGTGGCCTCGCTGCCCCAGTTCCCCTCTCTGCCCCCACACTC GTCTTAGTTGCTTCACACTGGTCACTGGCCCTGCACACTGGGCTATTGCTTTATCCCTATCCTGAGAGCAGCCCC TCCCCACCATCCTCCACATGCTGCAAGGACAGACTGAAGGGCTGTGAGCAGGTGTAAGGGCTCCCACATCCGTG CCCAGAGCACTCCTGGAAGTGGGACTCCCCTGCCTTGCAAATGTGCCTCTCCAGACTGCTCCTGCACTTACCCCC AAAAA

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2663/6881 FIGURE 2450

MDPPAEKPGEAGGLQITPQLLKSRTGEFSLESILLLKLRGLGLADLGCLGECLGLEWLDLSGNALTHLGPLASLR QLAVLNVSNNRLTGLEPLATCENLQSLNAAGNLLATPGQLQCLAGLPCLEYLRLRDPLARLSNPLCANPSYWAAV RELLPGLKVIDGERVIGRGSEFYQLCRDLDSSLRPSSSPGPRATEAQPWVEPGYWESWPSRSSSILEEACRQFQD TLQECWDLDRQASDSLAQAEQVLSSAGPTSSFVF

GGCAGGCACCAGCTGGGGAAGGCTGGTGTTGCCTTGTCGGCCACATTCTGGAGCCCGGCAGACAGCCTCAGCAAG CTCCTGTAGCCCTTCCAGATGGTGGTCCGCGAGGCGAGTGCGGCACAGGCCTCTCTGAGCCAGGTGCTGCCCCAG GCCATCCAGCTGGCTGAGGGGTTGGCCCGGCAGCTCTGCACCGACTGTCAGCTCAACAAGCTCTTCTACCGCGAG GAGTTTGTGCTGGCCACCTTGCTGGACCCTTGCTTCAAGGGGAAGATTGAGGCCATCCTGCCATGGGGGCCGACC GACATTGACCACTGGAAGCAAGTCCTCGTGTACAAGGTGAAGGAGATTAGAGTGTCTGAATACTCTTTGAACTCC CCAAGTCCCCTGCAAAGCCCCAGGGGTCTGTGCGTGGACCCCACCAGGGTAGCCAAGAGCTCCGGGGTGGAGGG AGAAGCCAGGGGGAGCCTCTGCAGAGCAGCAGCCACTCTGGGGCCTTCCTGCTGGCCCAGAGGGAGAAGGGCTTG CTGGAGAGCATGGGGCTGCTGGCCTCTGAGAGAAGCGGGGGCTCGCTGTCCACCAAGAGCCACTGGGCCAGCATC ATTGTCAAGAAGTATCTGTGGGAGAATGAGACCGTTGGAGCCCAGGATGACCCCCTGGCTTACTGGGAGAAGAAG CGAGAAGCCTGGCCACCATCTATCTGTCTTACCCCCCACAGGAGCCTTCTCTGAAAGCATCTTTGCCTCCCTGAA CAGCCCCACCCTTGTAGAGCAAAACTCTTCTCTCAAGGTGGAAGCCATTGAGCATCTCCTCTTCTTGAAGGCCAA CCTGGAGCAGTTCCCCAACTACACCCCGCCTCCCCTCAFCTGCTCTAGTGGTGACCTGGCCAAGGGGATACAGAC CCTGCAGTCCGCTCAGGGTGGGATGGCAGACATGGCAGGTGCCGGTGCTCACCCTGCCCGTGAACTCCTAGAGAG CCCCTGCCTGTAATAGGTCAAAGCAGAGAGCTGGGTGTTGCATCCTGGGCGCCACATGCTCATGGCCAGAATCTT TCCATCTCCCGATTACTTCCTTTACGTCTAGCAGTATGTGCCGAGAAGAGGCTTACTCTCTTCGTAGGTGACTGT GAATTTTGTACTACGTGGCTTTGTACATGTGATGCTCTGTTAAAACATAAGTGGGTATGAAGGTCCTTGCATACA GGGCATGTGCTGCAGGTGGGATATGTCCTCAGCCTTTGGGGGCCTGGATAAGCTATTGCAGCACTTTCTGAGGC TTTCACTGTAGGGAGAAGGAAACCCCAAGGGTAGAATAGCCATTTCCAGAGGGAAGTACACACATACCCCCACAC GACGCCAGTCCTCAAATGGCGTTCTTACCAATAGTCTATTTCCAGACTACTGGAAACGTTGGGGTTTCTTCCTCC CTGCTTGTCCTGGACCACTTTTAAAGGGGAAGTCCCTTATTTGGAAGAGAAAGGATGTGTGTAGCACACACTC ATCATGGATTGCTCAGAGTTCCTTTAGGGCAGAGCTGAGGGCCTGGGATCCAGGAACCAGTGGGATTGGATGGGA GAAGAAGGAAGGGGTGGCCCGTCACCCCCGCAAGACTTGCATCCAGGTAGCCTAAGGACTCCTGGTCACTGGGT AGGGTGGCTGCTGAGATGCAGGTCGGAAGAGGCAGGGGAAGGCTCCAGGCCTAACTTGGAGCATGTCACTGGCCA TGGGGGTGAGGGGACAGACTCTGCTCTCACTGGCTGGCAGCCCCAGGAGCCTGTTCCCTTGCCTCTCGGATGG GTTGTCAGCCCTGTGTTTCACTGTGACCAATTCATTATAACATTTGGATATTACTGAAAATGTAAGGAAGCAGGA AAAATTAACTACTTTCATTCAGAGATAGCCTCTATCAATAGTTTGACATTTTTCCCTCTTTTACATTGAGATCAT AAACATTTAAAAAAAAAAAAAAAAAAAAAAAAA

MVVREASAAQASLSQVLPQLRYLHIFLEQVHTHFQEQSVGERGAAIQLAEGLARQLCTDCQLNKLFYREEFVLAT LLDPCFKGKIEAILPWGPTDIDHWKQVLVYKVKEIRVSEYSLNSPSPLQSPRGLCVDPTRVAKSSGVEGRSQGEP LQSSSHSGAFLLAQREKGLLESMGLLASERSGGSLSTKSHWASIIVKKYLWENETVGAQDDPLAYWEKKREAWPP SICLTPHRSLL

ATGTCCGGGGCTCTAGGGGGTTCATAGATGGCAGCTCCTGTCCGGGGCTGAGGTTGGGAGGGGAGAAACAGGGGCA GAGTGAGTTGGTCTCTGGAGTGACTGTGCTTTTCCACCCTCAGCAGAGGAAGAACCGATGCTGGAACGTCGTTGC AGGGGCCCCTGGCCATGGGCCTGGCCCAGCCCCGACTCCTTTCTGGGCCCTCCCAGGAGTCACCCCAGACCCTG CATCGCTGTGCCCACTGTCGAAGGCACTTCCCTGGCTGGGTGGCTCTGTGGCTTCACACCCGCCGGTGCCAGGCC CGGCTGCCCTTGCCCTGAGTGTGGCCGTCGCTTTCGCCATGCCCCCTTCTTAGCACTGCACCGCCAGGTC CATGCTGCCACCCCAGACCTGGGCTTTGCCTGCCACCTCTGTGGGCAGAGCTTCCGAGGCTGGGTGGCCCTG GTTCTGCATCTGCGGGCCCATTCAGCTGCAAAGCGGCCCATCGCTTGTCCCAAATGCGAGAGACGCTTCTGGCGA TGTGGCCGGAGCTTTGCCCAGTGGGACCAGCTAGTTGCCCACAAGCGGGTGCACGTAGCTGAGGCCCTGGAGGAG GTCGACCGCCCTTCCAGTGTGCCTGTTGTGGCAAGCGCTTCCGGCACAAGCCCAACTTGATCGCTCACCGCCGC GTGCACACGGGCGAGCGCCCCACCAGTGCCCCGAGTGCGGGAAGCGCTTTACCAATAAGCCCTATCTGACTTCG CACCGGCGCATCCACACCGGCGAGAAGCCCTACCCGTGCAAAGAGTGCGGCCGCCGCTTCCGGCACAAACCCAAC CTGCTGTCTCACAGCAAGATTCACAAGCGATCCGAGGGGTCGGCCCAGGCCCCCCGGCCCCGGGGAGCCCCCAG CTGCCAGCCGGCCCCAGGAGTCCGCGGCCGAGCCCACCCGGCGGTACCTCTGAAACCGGCCCAGGAGCCGCCG AGGAGCTTCCGGCTGGAGCGCTTCCTGCGGGCCCACCAGCGCAGCACCACCGGGGAGCGGCCCTTCACCTGCGCC GAGTGCGGGAAGAACTTCGGCAAGAAGACGCACCTGGTGGCGCACTCGCGCGTGCACTCCGGCGAGCGGCCCTTC GCCTGCGAGGAGTGCGGCCGCCTCTCCCCAGGGCAGCCATCTGGCGGCGCATCGGCGCGCACCACGCCCCCGAT CGGCCCTTCGTGTGTCCCGACTGCGGCAAGGCCTTCCGCCACAAACCCTACCTGGCGGCGCACCGGCGCATCCAC ACCGGCGAGAAGCCCTACGTCTGCCCCGACTGCGGCAAAGCCTTCAGCCAGAAGTCCAACCTGGTGTCGCACCGG CGCATCCACACGGGCGAGCGGCCCTACGCCTGTCCCGACTGCGACCGCAGCTTCAGCCAGAAGTCCAACCTCATC ACCCACCGCAAGAGCCACATCCGGGACGCCCTTCTGCIGTGCCATCTGTGGCCAGACCTTCGACGACGAGGAG AGACTCCTGGCCCACCAGAAGAAGCACGATGTCTGAGACGGTGGGCGGGGCCGTGTTGGCTGAGAGAGGGCTGGG GTCCTTCGTGGTGGGAGTCGCAGTGGGCTGGGGTGCCTAGTGCTGGAGTAGGGGACAATGGGAATCCTAG AGGGGATGGAAGACGCGGGGGGTGAGCTGGGTGGCCCTGCTAGCGAGAGAGGTCAACCCCGGTGGCCAGGGAAC CCACTTCCAAGCGCAGGGACGCCGGCCTCCAGCTGGTGTGTGCTAAGGCTCCGTCCTGACTGCCCTGTGCCCTGG AAAAGCAGCAATAGCATCCGCCCCTTAGAGCCCTCTGGCTAGAGGAGCCCACCAGTGGAAAGGAAGACCCTCCATC CTCTGGTATTAACGCCTTAATGCCCCTGTCTTTTACTGTAAGTTACTTAAGATCATTTTTGGAAGCAGGCGTGGT AGAGTCCTGTAAATGAATGCTCTGGGCTAGATACAGCTTGGAGAACCTGCTGGCCTTGTTAGACAGCACTTGGGC CTTTGCCAGCAGCAAGAGGTGAAGCGAAGCCACTCTTACCTCTCCCTTCCCCTCCCACCTGCCCTGCGTAGGC ACCCAGACTTGGAGAGACCCGTCTGCTGTTAATACTTCCATCCTCTTCCCTAAAGAGCAGATCCCAAGGCAT TTACTCCTTGGTCTGTCTCGCTTTATCTGTCGCCCCTCCCAGCGCTGAGAGCCTCCCCTGGCTGTCAGCAGCACT GTGTCCAGGCTCTTGTCTGAACACCGCAGCCCCTCCTTCGCTCCTTCCAGAGCTCAGCATGTCACGGCAAGGACT GCCGCATTGGTGATGGAGGGCCAGCTGAGGGGAAGTTGCTGGTGAGTTTCCTTTTCTCCATTTCTAGCATATGGA CACCTGGCCTCTGATGACACTTAGGTGACAGGAACTTCCGCACCTCCTGAGGCCCTGGATGATTCTAATTGTT TTGTTCTGTTCTCTGGAACTAAACAGAACAACCATTTACCCCTCCTTTTCAAACTAGAGAATAAAGATTTGGTTT TAG

2667/6881 FIGURE 2454A

GGGGAGCCGGGAGCCGAGGAGCCCGCCGCCCCCAGTCCAGTCTTGGCCGCGCCCCTGCTCGCCTTGGCCGCG CCCGCCGGCCCCCATGGGCTCAGGATGCCGGTGCGGAGGGGCCACGTCGCGCCGCAGAACACCTTCCTGGAC ACCATCATCCGCAAGTTTGAGGGCCAGAGCCGTAAGTTCATCATCGCCAACGCTCGGGTGGAGAACTGCGCCGTC ATCTACTGCAACGACGGCTTCTGCGAGCTGTGCGGCTACTCGCGGGCCGAGGTGATGCAGCGACCCTGCACCTGC CGCAAAGTGGAAATCGCCTTCTACCGGAAAGATGGGAGCTGCTTCCTATGTCTGGTGGATGTGGTGCCCGTGAAG AACGAGGATGGGGCTGTCATCATGTTCATCCTCAATTTCGAGGTGGTGATGGAGAAGGACATGGTGGGGTCCCCG GGGGCCGTGGTGGTGGACGTGGACCTGACGCCCGCGGCACCCAGCAGCGGGTCGCTGGCCCTGGACGAAGTGACA GCCATGGACAACCACGTGGCAGGGCTCGGGCCCGCGGAGGAGCGGCGTGCGCTGGTGGGTCCCGGCTCTCCGCCC CGCAGCGCCCGGCCAGCTCCCATCGCCCCGGGCGCACAGCCTCAACCCCGACGCCTCGGGCTCCAGCTGCAGC CTGGCCCGGACGCGCTCCCGAGAAAGCTGCGCCAGCGTGCGCCGCCCTCGTCGGCCGACGACATCGAGGCCATG CGCGCCGGGGTGCTGCCCCCGCCACCGCGCACGCCAGCACCGGGGCCATGCACCCACTGCGCAGCGGCTTGCTC AACTCCACCTCGGACTCCGACCTCGTGCGCTACCGCACCATTAGCAAGATTCCCCAAATCACCCTCAACTTTGTG GACCTCAAGGGCGACCCCTTCTTGGCTTCGCCCACCAGTGACCGTGAGATCATAGCACCTAAGATAAAGGAGCGA ACCCACAATGTCACTGAGAAGGTCACCCAGGTCCTGTCCCTGGGCGCCGACGTGCTGCCTGAGTACAAGCTGCAG GCACCGCGCATCCACCGCTGGACCATCCTGCATTACAGCCCCTTCAAGGCCGTGTGGGACTGGCTCATCCTGCTG CTGGTCATCTACACGGCTGTCTTCACACCCTACTCGGCTGCCTTCCTGCTGAAGGAGACGGAAGAAGGCCCGCCT GCTACCGAGTGTGGCTACGCCTGCCAGCCGCTGGCTGTGGTGGACCTCATCGTGGACATCATGTTCATTGTGGAC ATCCTCATCAACTTCCGCACCACCTACGTCAATGCCAACGAGGAGGTGGTCAGCCACCCCGGCCGCATCGCCGTC CACTACTTCAAGGGCTGGTTCCTCATCGACATGGTGGCCGCCATCCCCTTCGACCTGCTCATCTTCGGCTCTGGC TCTGAGGAGCTGATCGGGCTGCTGAAGACTGCGCGGCTGCTGCGGCTGCGCGCGGCGGGAAGCTGGATCGC TACTCAGAGTACGGCGCGGCCGTGCTGTTCTTGCTCATGTGCACCTTTGCGCTCATCGCGCACTGGCTAGCCTGC ATCTGGTACGCCATCGGCAACATGGAGCAGCCACACATGGACTCACGCATCGGCTGCACAACCTGGGCGAC CAGATAGGCAAACCCTACAACAGCAGCGGCCTGGGCGGCCCTCCATCAAGGACAAGTATGTGACGGCGCTCTAC TTCACCTTCAGCAGCCTCACCAGTGTGGGCTTCGGCAACGTCTCTCCCAACACCCAACTCAGAGAAGATCTTCTCC ATCTGCGTCATGCTCATTGGCTCCTCATGTATGCTAGCATCTTCGGCAACGTGTCGGCCATCATCCAGCGGCTG TACTCGGGCACAGCCCGCTACCACACACAGATGCTGCGGGTGCGGGAGTTCATCCGCTTCCACCAGATCCCCAAT CCCCTGCGCCAGCGCCTCGAGGAGTACTTCCAGCACGCCTGGTCCTACACCAACGGCATCGACATGAACGCGGTG CCCTTCCGAGGGGCCACCAAGGGCTGCCTTCGGGCCCTGGCCATGAAGTTCAAGACCACACATGCACCGCCAGGG GACACACTGGTGCATGCTGGGGACCTGCTCACCGCCCTGTACTTCATCTCCCGGGGCTCCATCGAGATCCTGCGG GGCGACGTCGTCGTCGCCATCCTGGGGAAGAATGACATCTTTGGGGAGCCTCTGAACCTGTATGCAAGGCCTGGC AAGTCGAACGGGGATGTGCGGGCCCTCACCTACTGTGACCTACACAAGATCCATCGGGACGACCTGCTGGAGGTG CTGGACATGTACCCTGAGTTCTCCGACCACTTCTGGTCCAGCCTGGAGATCACCTTCAACCTGCGAGATACCAAC ATGATCCCGGGCTCCCCGGCAGTACGGAGTTAGAGGGTGGCTTCAGTCGGCAACGCAAGCGCAAGTTGTCCTTC CCGAGTAGCCGGGGCCGGCGGGGGGCCGTGGGGGGAGAGCCCGTCCAGTGGCCCTCCAGCCCTGAGAGCAGT GAGGATGAGGGCCCAGGCCCCAGCCCCCTCCGCCTGGTGCCCTTCTCCAGCCCCAGGCCCCCGGAGAG $\tt CCGCCGGGTGGGGAGCCCCTGATGGAGGACTGCGAGAAGAGCAGCGACACTTGCAACCCCTGTCAGGCGCCTTC$ TCAGGAGTGTCCAACATTTTCAGCTTCTGGGGGGACAGTCGGGGCCGCCAGTACCAGGAGCTCCCTCGATGCCCC GCCCCCACCCCAGCCTCCTCAACATCCCCCTCTCCAGCCCGGGTCGGCCGCCCCGGGGCGACGTGGAGAGCAGG CTGGATGCCCTCCAGCGCCAGCTCAACAGGCTGGAGACCCGGCTGAGTGCAGACATGGCCACTGTCCTGCAGCTG CTACAGAGGCAGATGACGCTGGTCCCGCCCGCCTACAGTGCTGTGACCACCCCGGGGCCTGGCCCCACTTCCACA ${\tt TCCCGCTGTTGCCCGTCAGCCCCTCCCCACCTTGGACTCGCTTTCTCAGGTTTCCCAGTTCATGGCG}$ TGTGAGGAGCTGCCCCGGGGGCCCCAGAGCTTCCCCAAGAAGGCCCCACACGACGCCTCTCCCTACCGGGCCAG

2668/6881 FIGURE 2454B

2669/6881 FIGURE 2455A

AGTCCAGAGCGAGCGGGTTATGCCTCCGCCTCGTTGCCCTGAAAGCCGCAGCGACAGCGAAAAGGGCTAAGATTC $\verb|CCCTGGGACGCCTGGGTTCCCCGAGCAGGAGGAAGACGAACTTCACCGCACCCTGGGCGTGGAGCGGTTTGAGGA|$ GATCCTACAGGAGGCCGGGTCTCGTGGAGGGGAGGAGCCAGGCCGCAGCTATGGGGAGGAGACTTTGAGTACCA CTCCTCGGTGCAGTTCTTTCTCCAAGAGGATGACAGTGCTGACCGGAAGGCAGAGAGGACCAGTCCATCTTCCCC TGCACCACTGCCCCACCAGGAGGCGACTCCTCGGGCCTCCAAAGGGGCCCAGGCTGGAACCCAGGTGGAGGAGGC ${\tt GGAGGCGGAGGCGGTGGCCAGTGGCACTGCAGGGGGTGACGACGGGGGTGCCTCGGGGCCCCCCTGCC}$ CAAAGCCCAGCCTGGGCACCGCAGCTACAACCTTCAGGAGAGGAGGCGCATCGGGAGCATGACTGGGGCTGAGCA GGCACTGCTGCCCCGGGTCCCCACGGATGAGATTGAGGCCCAGACGCTGGCCACGGCCGACCTAGACCTCATGAA GAGTCACCGGTTTGAGGACGTTCCTGGGGTGCGGCGCACTTGGTGCGGAAGAATGCCAAAGGTTCCACACAGAG $\tt TGGCCGAGAAGGGCGGGAGCCTGGCCCCACACCTCGGGCCCGACCCCGGGCCCCCACAAGCCCCATGAGGTGTT$ TGTGGAGCTGAATGAGTTGCTCCTGGACAAAAACCAGGAGCCCCAGTGGCGGGAGACAGCTCGCTGGATCAAATT $\tt CCAGGTGGTGGAGCAGATGGTCATCTCTGACCAGATCAAGGCCGAGGACAGGGCCAACGTGCTGCGGGCTCTGCT$ GTTGAAACACACCACCCAAGTGATGAGAAGGACTTCTCCTTCCCCCGCAACATCTCAGCTGGCTCCCTGGGCTC $\verb|CCTGCTGGGGCATCACCATGGTCAGGGGGCTGAGAGTGACCCCCACGTCACCGAGCCTCTCATGGGAGGTGTTCC| \\$ TGAGACCCGGCTGGAGGTGGAGCGAGAGCGTGAGCTGCCGCCTCCAGCACCACCAGCTGGCATCACCCGCTCCAA ${\tt GTCCAAGCACGAGCTGAAACTGCTGGAGAAGATTCCTGAGAATGCCGAGGCCACGGTGGTCCTTGTGGGCTGCGT}$ GGAGTTCCTCTCCCGCCCCACCATGGCCTTTGTGCGGCTCCGGGAGGCTGTGGAGTTGGACGCAGTGTTGGAGGT GCCGGTGCCTGTGCGTTTCCTCTTCCTGCTGGGCCCGAGTAGTGCCAACATGGACTACCACGAGATCGGCCG GACGGCCATCAACGCCTTCCTGGACTGCAGCGTGGTGCTGCCGCCTTCAGAAGTGCAGGGCGAGGAGCTGCTGCG GCTGGAGCCCAAATCTGCCCAAGATAAGGCGCTCCTGCAGATGGTAGAGGCGGCAGGGGCAGCTGAAGATGATCC CCTTCGGCGGACGGGCCCCTTTGGGGGGCCTGATCCGAGATGTGCGGCGCCGCTATCCCCACTACCTGAGTGA $\tt CTTCCGAGATGCACTTGACCCTCAGTGCCTGGCCGCAGTCATCTTCATCTACTTTGCCGCCCTGTCTCCTGCCAT$ CACCTTTGGGGGGCTGCTGGGAGAAGACGCAGGACCTGATAGGGGTGTCGGAGCTGATTATGTCCACAGCGCT CCAGGGCGTGGTCTTCTGCCTGCTGGGTGCCCAGCCCCTGTTGGTGATCGGCTTCTCAGGGCCCCTGCTGGTCTT TGAGGAGGCCTTCTTCTCGTTCTGTAGCAGCAACCACCTGGAGTACCTGGTGGGCCGTGTGTGGATCGGCTTCTG GCTGGTGTTCCTGGCCCTGCTCATGGTGGCCCTGGAGGGGAGCTTCCTGGTCCGCTTCGTCTCCCGCTTCACCCA GGAGATCTTCGCCTTCTTGATCTCACTCATCTTCATCTATGAGACCTTCTACAAGCTGGTGAAGATCTTCCAGGA GCACCCCTGCATGGCTGCTCAGCCTCCAACAGCTCAGAGGTGGACGGCGGTGAGAACATGACATGGGCCGGGGC AAGACCCACGCTGGGGCCGGCAACAGGAGCTTGGCTGGGCAGTCTGGGCAGGGGAAGCCCCGGGGCCAGCCCAA ${\tt CACGGCCTGCTGTCGCTGGTGCTCATGGCCGGCACCTTCTTCATCGCCTTCTTCCTGCGCAAATTCAAGAACAG}$ $\tt CCGGTTCTTTCCTGGCCGGATCCGGCGGTGATTGGGGACTTTGGGGTGCCCATCGCCATCCTCATCATGGTGCT$ TGTGGATTACAGTATTGAGGACACCTATACCCAGAAGCTGAGCGTTCCCAGTGGATTCTCGGTGACTGCCCCAGA AAAGAGGGGCTGGGTCATCAACCCCCTGGGAGAGAGAGCCCCTTCCCTGTGTGGATGATGGTTGCCAGCCTGCT GCCCGCCATCCTGGTCTTCATCTCATCTTCATGGAGACACAGATCACCACGCTCATCATCTCCAAGAAGGAGCG CATGCTGCAGAAGGGCTCCGGCTTCCACCTGGACCTGCTCATCGTGGCCATGGGCGGCATCTGTGCCCTCTT TGTGGCACCTGGGGACAAGCCCAAGATTCAGGAAGTCAAGGAGCAGCGGGTGACGGGGCTGCTGGTTGCCCTGCT TGTGGGCCTCTCCATAGTTATCGGGGATCTGCTCCGGCAGATCCCCCTGGCCGTGCTCTTTGGAATTTTCCTGTA CATGGGAGTCACCTCCCTTAACGGGATCCAGTTCTATGAGCGGCTGCATCTGCTGCTCATGCCGCCCAAACACCA CCCAGATGTCACTTACGTCAAGAAGGTCCGGACCCTCCGTATGCACCTGTTCACGGCCCTGCAGCTGCTCTGCCT

FIGURE 2455B

FIGURE 2456

GCGGCGGGGGAAGGAGGGGTGCTTCAGGTGCCTGCGACCTCCGCGCCCGGGAAGTGCCCGAGGGGCC AGCTACCGACAGCATGAGAGGGGAGGCCCCAGGGGCAGAGACCCCCAGCCTGAGACACAGAGGTCAAGCTGCACA GCCAGAGCCCAGCACGGGGTTCACAGCAACACCGCCAGCCCCGGACTCCCCGCAGGAGCCCCTCGTGCTACGGCT GAAATTCCTCAATGATTCAGAGCAGGTGGCCAGGGCCTGGCCCCACGACACCATTGGCTCCTTGAAAAGGACCCA GTTTCCCGGCCGGGAACAGCAGGTGCGACTCATCTACCAAGGGCAGCTGCTAGGCGACGACACCCAGACCCTGGG CAGCCTTCACCTCCCAACTGCGTTCTCCACTGCCACGTGTCCACGAGAGTCGGTCCCCCAAATCCCCCCTG $\tt CCCGCCGGGGTCCGAGCCCGGCCCTCCGGGCTGGAAATCGGCAGCCTGCTGCTGCTGCTCCTGCTGTT$ GCTGCTGCTCTGGTACTGCCAGATCCAGTACCGGCCCTTCTTTCCCCTGACCGCCACTCTGGGCCTGGCCGGCTT $\texttt{CACCCTGCTCCTCAGTCTCCTGGCCTTTGCCATGTACCGCCCG} \underline{\textbf{TAG}} \\ \texttt{TGCCTCCGCGGGGCGCTTGGCAGCGTCGCC} \\$ $\tt CGGGGCTCGGGGCCACCTCCCGGGGCTGCTGACCCTCAGCCCGCACTGGGAGTGGGCTCCTCGGGGTCGGGCATC$ TGCTGTCGCTCGCCCCGGGCAGAGCCGGGCCCCCGGGGGCCCGTCTTAGTGTTCTGCCGGAGGACCCA

MTLIEGVGDEVTVLFSVLACLLVLALAWVSTHTAEGGDPLPQPSGTPTPSQPSAAMAATDSMRGEAPGAETPSLR HRGQAAQPEPSTGFTATPPAPDSPQEPLVLRLKFLNDSEQVARAWPHDTIGSLKRTQFPGREQQVRLIYQGQLLG DDTQTLGSLHLPPNCVLHCHVSTRVGPPNPPCPPGSEPGPSGLEIGSLLLPLLLLLLLLLLWYCQIQYRPFFPLTA TLGLAGFTLLLSLLAFAMYRP

CCCAGCTCCCTGAAACAACAGTAACCTACCCCTGTGGGTCATCATCATCATCCCCTCCGACCTGGCCAAGAAGAAGAAGGC AGCCAAAAAGAAGGAGGCTGCCAAAGCTCGACAGCGGCCCAGAAAAGGACATGAAGAAAATGGAGATGTTGTCAC AGAACCACAGGTGGCAGAGAAGAATGAGGCCAATGGCAGAGAGCCACAGAAGTAGATTTGCTGACCAAGGAGCT AGAGGACTTTGAGATGAAGAAAGCTGCTGCTCGAGCTGTCACTGGCGTCCTGGCCTCTCACCCCAACAGTACTGA TGTTCACATCATCAACCTCTCACTCACCTTTCATGGTCAAGAGCTGCTCAGTGACACCAAACTGGAATTAAACTC AGGCCGTCGTTATGGCCTCATTGGTTTAAATGGAATTGGAAAGTCCATGCTGCTCTCTGCTATTGGGAAGCGTGA AGTGCCCATCCCTGAGCACATCGACATCTACCATCTGACTCGAGAGATGCCCCCTAGTGACAAGACACCCTTGCA GTGTGAGAAGCTCATGGAGCTCTACGAGCGCCTGGAGGAGCTGGATGCCGACAAGGCAGAGATGAGGGCCTCGCG GATCTTGCATGGACTGGGTTTCACACCTGCCATGCAGCGCAAGAAGCTAAAAGACTTCAGTGGGGGCTGGAGGAT $\tt CCTAGATGCTTGCGTGTGGTTGGAAGAAGAACTAAAAACTTTTAAGCGCATCTTGGTCCTCGTCTCCCATTCCCCATTCCCCATTCCCATTCCCCATTCCCATTCCCATTCCCATTCCCCATTCCCATTCCCATTCCCCATTCCCCATTCCCATTCCCATTCCCATTCCCATTCCCATTCCCATTCCCCATTCCATTCCCATTCCATTCCATTCCCATTCATTCCATTCCATTCCATTCATTCATTCCATTCCATTCATTCATTCCATTCATTCATTCATTCATTCATTCCATTC$ GGATTTTCTGAATGGTGTCTGTACCAATATCATTCACATGCACAAGAAACTGAAGTATTATACGGGTAATTA TGATCAGTATGTGAAGACGCGGCTAGAGCTGGAGGAGAACCAGATGAAGAGGTTTCACTGGGAGCAAGATCAGAT TGCACACATGAAGAACTACATTGCGAGGTTTGGTCATGGCAGTGCCAAGCTGGCCCGGCAGGCCCAGAGCAAGGA ${\tt GAAGACGCTACAGAAAATGATGGCATCAGGACTGACAGAGAGGGTCGTGAGCGATAAGACACTGTCATTTTATTT}$ CCCACCATGTGGCAAGATCCCTCCACCTGTCATTATGGTGCAAAATGTGAGCTTCAAGTATACAAAAGATGGGCC TTGCATCTACAATAATCTAGAATTTGGAATTGACCTTGACACACGAGTGGCTCTGGTAGGGCCCAATGGAGCAGG GAAGTCAACTCTTCTGAAGCTGCTAACTGGAGAGCTACTACCCACAGATGGCATGATCCGAAAACACTCTCATGT CAAGATAGGGCGTTACCATCAGCATTTACAAGAGCAGCTGGACTTAGATCTCTCACCTTTGGAGTACATGATGAA GTGCTACCCAGAGATCAAGGAGAAGAAGAAATGAGGAAGATCATTGGGCGATACGGTCTCACTGGGAAACAACA CCACATGCTCTTCCTGGATGAACCCACCAATCACCTGGATATCGAGACCATCGACGCCCTGGCAGATGCCATCAA TGAGTTTGAGGGTGGTATGATGCTGGTCAGCCATGACTTCAGACTCATTCAGCAGGTTGCACAGGAAATTTGGGT CTGTGAGAAGCAGACAATCACCAAGTGGCCTGGAGACATCCTGGCTTACAAGGAGCACCTCAAGTCCAAGCTGGT $\tt GGATGAGGAGCCCCAGCTCACCAAGAGGACCCACAACGTGTGCACCCTGACATTGGCATCTCTGCCAAGGCCA\underline{TG}$ **AGCATCATGAACTCGTTTGTAAACGACGTGTTTGAGCAGCTGGCGTGTGAGGCTGCCCGGCTGGCCCAGTACTCG** GGCCGGACCACCCTGACATCCCGAGAAGTCCAGACGGCTGTGCGTCTGCTGCTGCTGCCTGGGGAGCTGGCCAAGCAC GCTGTGTCTGAGGGCACCAAGGCTGTCACCAAGTACACCAGCTCCAAGTGACCCAGGGCCTGACAAAAATAAAGG GTGAACTGTTAAAAAAAAAAAA

MPSDLAKKKAAKKEAAKARQRPRKGHEENGDVVTEPQVAEKNEANGRETTEVDLLTKELEDFEMKKAAARAVTG VLASHPNSTDVHIINLSLTFHGQELLSDTKLELNSGRRYGLIGLNGIGKSMLLSAIGKREVPIPEHIDIYHLTRE MPPSDKTPLHCVMEVDTERAMLEKEAERLAHEDAECEKLMELYERLEELDADKAEMRASRILHGLGFTPAMQRKK LKDFSGGWRMRVALARALFIRPFMLLLDEPTNHLDLDACVWLEEELKTFKRILVLVSHSQDFLNGVCTNIIHMHN KKLKYYTGNYDQYVKTRLELEENQMKRFHWEQDQIAHMKNYIARFGHGSAKLARQAQSKEKTLQKMMASGLTERV VSDKTLSFYFPPCGKIPPPVIMVQNVSFKYTKDGPCIYNNLEFGIDLDTRVALVGPNGAGKSTLLKLLTGELLPT DGMIRKHSHVKIGRYHQHLQEQLDLDLSPLEYMMKCYPEIKEKEEMRKIIGRYGLTGKQQVSPIRNLSDGQKCRV CLAWLAWQNPHMLFLDEPTNHLDIETIDALADAINEFEGGMMLVSHDFRLIQQVAQEIWVCEKQTITKWPGDILA YKEHLKSKLVDEEPQLTKRTHNVCTLTLASLPRP

ATCGCGGCGTCCCCTTTTTTTTGCCTTTAAAGTAAAACGTCGCCCCGACGCACCCCCGCGTATTTCGGGGGGGCG CGCCCCTGCTCTGTATGCCGCTCTCTCCCGGCGCGCCGCCGCCGATCACAGCAGCAGCAGCACCGCCGCCGCCGC GTTGATGTGGTTGGGCCGGGGCTGAGGAGGCCGCCAAGATCCCGCAGTCCAAGTCCCGGAAGATCGCGATCCTGG GCTACCGGTCTGTGGGGAAATCCTCATTGACGATTCAATTTGTTGAAGGCCAATTTGTGGACTCCTACGATCCAA CCATAGAAACACTTTTACAAAGTTGATCACAGTAAATGGACAAGAATATCATCTTCAACTTGTAGACACAGCCG GGCAAGATGAATATTCTATCTTTCCTCAGACATACTCCATAGATATTAATGGCTATATTCTTGTGTATTCTGTTA CATCAATCAAAAGTTTTGAAGTGATTAAAGTTATCCATGGCAAATTGTTGGATATGGTGGGGAAAGTACAAATAC CTATTATGTTGGTTGGGAATAAGAAAGACCTGCATATGGAAAGGGTGATCAGTTATGAAGAAGGGAAAGCTTTGG CAGAATCTTGGAATGCAGCTTTTTTGGAATCTTCTGCTAAAGAAAATCAGACTGCTGTGGATGTTTTTCGAAGGA TAATTTTGGAGGCAGAAAAAATGGACGGGCAGCTTCACAAGGCAAGTCTTCATGCTCGGTGATG<u>TGA</u>TTCTGCT GCAAAGCCTGAGGACACTGGGAATATATTCTACCTGAAGAAGCAAACTGCCCGTTCTCCTTGAAGATAAACTATG CTTCTTTTTCTTCTGTTAACCTGAAAGATATCATTTGGGTCAGAGCTCCCCTTCCGTTCAGATTATGTTAACTCT GAGTCTGTCCAAATGAGTTCACTTCCATTTTCAAATTTTAAGCAATCATATTTTCAATTTATATATTGTATTTCT TAATATTATGACCAAGAATTTTATCGGCATTAATTTTTCAGTGTAGTTTGTTGTTTAAAATAATGTAATCATCAA AATGATGCATATTGTTACACTACTATTAACTAGGCTTCAGTATATCAGTGTTTATTTCATTGTGTTAAATGTATA

WO 2004/030615 PCT/US2003/028547

2676/6881 FIGURE 2461

 $\label{thm:posksrkialigyrsvgkssltiqfvegqfvdsydptientftklitvngqeyhlqlvdtagqdeysifpqtys \\ idingyilvysvtsiksfevikvihgklldmvgkvqipimlvgnkkdlhmervisyeegkalaeswnaaflessa \\ kenqtavdvfrriileaekmdgaasqgksscsvm$

2677/6881 FIGURE 2462A

GATTTACTTGGAGAAGATTTGCTATCTGGCAAAAAGAATCAGTCGGATTTGTCAGATGAAGAGCTAAATGATGAT CTTTTGCAGAGTGATAATGAAGATGAAGAAAATTTCAGTTCTCAGGGTGTTACAATTAGTCTGAATGCTACATCT GGCATGGTTACATCATTTGAACTCTCTGACAACACTAACGACCAATCTGGAGAACAGGAATCTGAGTATGAACAA GAACAAGGAGGATGAACTGGTTTATCACAAATCTGATGGATCAGAATTGTATACTCAAGAGTACCCAGAAGAA GGACAGTATGAAGGCCACGAAGCTGAGTTGACAGAAGACCAAATAGAATATGTGGAAGAGCCAGAGGAGGAGCAG CTTTACACTGATGAAGTGTTAGACATCGAGATCAATGAACCTTTAGATGAATTTACAGGAGGTATGGAAACATTG GAACTTCAAAAGGACATCAAAGAAGAATCAGATGAAGAAGAAGAAGATGATGAAGAATCTGGACGATTACGTTTC TTGGAGCTTTCAGCAGAGGCCAAGGCAGCATTGCTTGAATTTGAAGAAAGGGAGCGACAGCATAAACAAGGACGC ACCGAGAGGGGCAGGATGAAGGACCACAGACCTGCGCTGCTTCCTACACAGCCTCCTGTCGTGATACTTCCAGAG GAGGAATTAATGAGCGACCTGATGCCCTAAGATGACATAAGCTGTTGGACCTTGCTACCTAAAGCCTCTAGAGAG CCCCAGGCTCCCCCTCCACCGCCTCCGCCCCCCAGCAGCAGCCGATCAGAAGCCTGTTCCAGCCGCAGCCGCTG CAGCCGCTGCTTCCGGTGCAGCACCCGCACCCATCCCCGCCTCAGGGAATGCACATGCCTCCCCAGCTAGAG ACCCCAAGGATGATGATGACCCCGCCACCGTGACTCCACAGCAGCCCAAGAACATACACATCAACCCGCACTTC CGACTCCCTCTCCAGGACCAGTGGAGAGCCCCACCCCCGCCTCAGGATCGAGACCCTTTCTTCTTAGGAGTTTCA GGTGAACCAAGATTCCCGAGCCATCTTTTCTGGAACAGCGAAGTCCCCCTCCACCACCACCACCGCCTCCTACCCTT CTTAACAGTAGCCATCCTGTTCCTACTCAGAGTCCTCTACCATTCACTCAGCCAGGACCAGCATTTAATCAGCAA GGACAGCAGCCAGTGTTCCCAAGAGAGCGGCCCGTACGACCAGCCTTGCAGCCTCCAGGTCCGGTGGGGATTCTG CACTTTAGCCAGCCTGGGTCGGCAACCACGGCCCTTCATTCCTCCTAGACAGCCGTTCCTGCCAGGCCCAGGA CAGCCGTTTCTGCCCACACACACACACCCCAACCTGCAGGTAATGCATCCTGAGTGAACCTCCAGGGAAAAAATG TGTAGCTTCAAGGCTTTGTGTTCCATAAAGTTTCAGATTTTTATTTGAGCCTACTAATTTGTGGTTATTTAAAGA ATAGAGTATTAGTCTCAAATGTACTGTTTGTTAAAGACAACTTTTTTCAACAATGTTACTTATCTCAATACAAGA AAAAAATGGGAAAATGTCATTTTTTGGGAATTGAAAAATGCTACTTATTATAATTGTTTAAAGGGTATACTACTA ATAAAATTAGGACATGTTTTGATAATACATTTGCTCATCTGTATAAAATTTCATGAGAGGTTTACCAGTGGAAAT ACTTTGTCAAATTATTCCTGCAGTAGACAGTTTTGAAAAGAGTCTTTGCATGGAGGGAAGAAGATGTTGCTGT TCACTGGTTATTTGAAGGCCTTGAGTGCCCTCTGCCGACCGGCTTCTGCTTCATGGGTTTTTCACTGGTTATTTGA TGTATATTTCTTCTTGTATTGTAGGGTTACTATTAAAATACATAGCGATGGTAAACTTGAATCAACTATTTAAAA ATACGTGGAATACGTATCTAAGCCAAAAACGGAAAATGAATATTATCTAGGGTGTTAAAGGAAGATAAAATGTTT TCTCGCCACCTGCTTTTCCCTCCAGTGTCACATATCATTTGATCTTTTCATGTCAGCGAGTTGGTTTTGATGCC CTTTAGTATCATAGTGCTACAGGGAACATGCTTTAGAGTTATGAGTTTGTCTGCATACCTAGTTTTCCTTAGGAC AATTCAATCCTAGAATTACTGGATTAAATATAAAATTTAAGGTAATAGCTTCTGGCTTATTACTGCATTTTAGAT AGTATTACCTTCATCAGCAAGTCTAAAATGAAGTTTTGGTATCGCTGAAAGTTCCTTTCTTGTTGTGAGGTTTTT GGGCCGTTGCATCCTCCATTGCCCCCTCCGCATCAGCCTCAGCCTCAGCAACCTCAGCAACAGCCCCCCGCCACAG CCACAGTTCCGGCCTCACGTACAGACCGCTCAGCCTCAGCCCAGCAGCAGCCGGATGCAGTGCCCCCAGCGCCAG AACAGCAATTTGCGTGAATTACCCATAGCGCCGTCACACGTGATAGAAATGAGCAGCAGCCGCTGCTCTGCCACG CCCTCAGCACAAGTGAAACCTATCGTCAGCGCGTCACCACCCTCGCGGGCCGTGGCGGGTTCCAGAAGCTCACAG GGAAAGACGGAAGTGAAAGTCAAGCCAGCTAGCCCTGTGGCTCAACCTAAAGAAGAGGCCAAAAAACAGAAACAGAG

2678/6881 FIGURE 2462B

GAGG<u>ATG</u>GAAGGGCAGGACGAGGTGTCGGCGCGGGAGCAGCTCCACAGCCAAGTGCGGGAGTCCACGATATG TTTCCTTCTTTTTGCCATTCTCTACGTTGTTTCCTACTTCATCATCACAAGATACAAGAGAAAATCAGATGAACA AGAAGATGAAGATGCCATCGTCAACAGGATTTCGTTGTTTTTTGAGCACGTTCACTCTCGCAGTGTCAGCTGGGGC GCTAAATGGCTCCCTGATTCATGGTTTGTGGAATCTTGCTTCCCTTTTTTCCAACCTTTGTTTATTTGTATTGAT GCCCTTTGCCTTTTCTTCTGGAATCAGAAGGCTTTGCTGGCCTGAAAAAGGGAATCCGAGCCCGCATTTTAGA GACTTTGGTCATGCTTCTTCTTGCGTTACTCATTCTTGGGATAGTGTGGGTAGCTTCAGCACTCATTGACAA GATGGGATGTTTGTTACTTCTCTTGTGTACACCAGTTGGCCTTTCTCGTATGTTCACAGTGATGGGTCAGTTGCT AGTGAAGCCAACAATTCTTGAAGACCTGGATGAACAAATTTATATCATTACCTTAGAGGAAGAAGCACTCCAGAG ACGACTAAATGGGCTGTCTTCATCGGTGGAATACAACATAATGGAGTTGGAACAAGAACTTGAAAAATGTAAAGAC TCTCCTTCTTATTGAGACATCCATCTCGGTCCTCTTGGTGGCTTGTAATATTCTTTGCCTATTGGTTGAAAAC AGCAATGCCAAAAGGAACAAGGGGGCCTGGAATAGGAAATGCCTCTCTTTCTACGTTTGGTTTTGTGGGAGCTGC GCTTGAAATCATTTTGATTTTCTATCTTATGGTGTCCTCTGTTGTCGGCTTCTATAGCCTTCGATTTTTTGGAAA CTTTACTCCCAAGAAAGATGACAACTATGACAAAGATCATTGGAAATTGTGTGTCCATCTTGGTTTTGAGCTC TGCTCTGCCTGTGATGTCGAGAACACTGGGAATCACTAGATTTGATCTACTTGGCGACTTTGGAAGGTTTAATTG GCTGGGAAATTTCTATATTGTATTATCCTACAATTTGCTTTTTGCTATTGTGACAACATTGTGTCTGGTCCGAAA ATTCACCTCTGCAGTTCGAGAAGAACTTTTCAAGGCCCTAGGGCTTCATAAACTTCACTTACCAAATACTTCAAG GGATTCAGAAACAGCCAAGCCTTCTGTAAATGGGCATCAGAAAGCACTGTGAGACGCACAGACGGCGTCTTCTGC CACCAAGAGACCCGAGAACTCCAGATTCACGACATTCCTGTCCCATGTAGAAGCATTTCCATTCAACCGTGGCCC CTCTTCAGAACCTAGACCTATCAGTGCCATTTTTTTTTCATAATCTACGAAGAACTTGGCTATGGCTGATCTTTT TTAAATTTAACTTTCTGATGGACCCTGTAGTTTCCAGTTAAGTGCAGATTCCTTACAGACATATAGAACAGCGCA TTCTTCTGTAGACATTTGCTCATGTTGGTAAATACAATCACCCATATGAAAAAATTGTTTTCACCTGATATGAAA ATGTTAGAAAAGGCAAACTCCGGGACTTCTAAAGATTTACTTAAATCCCATTATGTACTTTATTCAGAATGTAGA AGCTGACTTGAAAGGCATCCTTGGTACTAAGTGAAGCTTATTCAGAAAATGCATTTTTCAAATGCAATGGCAACT GCTTGTAGATATCATTTTTGCAGTGTATGTTGGAGCTGTAATGGTTGCAATTATGTTTCTTATTTCCTTAAAAGC AAAAAGCGTAGTTTCTGATTTATGTTATAGAATGATGATTAGACTTTGAGCCAAGGGGAAAATACTAAATTC TTTTAAACCTGGAGCCTTAGAGAGCCACAGGAATATCTTCTGTTGTACAGTCTAATAAGCTGTGGTAGGAAGTAT TTTAATACACTTGTAACTTGGATTTTTACCTTATAGGCTATATGTATACTCAGTTTTTTAAAGCATTTTTTCAG AGATCACTTAATTCCCCATGCTTCTGCAATGCATATAAAAACTATAAATGCCGAGTGGTAGAAACTCCTCTTTCT TCATAGTCCTCAGGCTTTGGTTACATTTGCATATGCCATTTGAAGCCTCCAGCTTTTACCAGTTTAACATCCAAA GTTCACAGCATCAGCATTCATGGTGTAAGAACAGTTTTGCAGTATAACACGATCTGATAATCATTCAGTTATTAA AAAAA

MEGQDEVSAREQHFHSQVRESTICFLLFAILYVVSYFIITRYKRKSDEQEDEDAIVNRISLFLSTFTLAVSAGAV LLLPFSIISNEILLSFPQNYYIQWLNGSLIHGLWNLASLFSNLCLFVLMPFAFFFLESEGFAGLKKGIRARILET LVMLLLALLILGIVWVASALIDNDAASMESLYDLWEFYLPYLYSCISLMGCLLLLLCTPVGLSRMFTVMGQLLV KPTILEDLDEQIYIITLEEEALQRRLNGLSSSVEYNIMELEQELENVKTLKTKLERRKKASAWERNLVYPAVMVL LLIETSISVLLVACNILCLLVDETAMPKGTRGPGIGNASLSTFGFVGAALEIILIFYLMVSSVVGFYSLRFFGNF TPKKDDTTMTKIIGNCVSILVLSSALPVMSRTLGITRFDLLGDFGRFNWLGNFYIVLSYNLLFAIVTTLCLVRKF TSAVREELFKALGLHKLHLPNTSRDSETAKPSVNGHQKAL

TCTTTCCGTAACCGTAGCTTGAGGCACATTTCCTAAATATGCAGCATGGAACGCTTGGCGGTTCTGAACGCGCAT $\tt CTCGTGCTCCTGTAGGGCGGTTAGGACGCGCTCCTCTGGCGAGGAAGGTGGCAGCCTCCACTGTGCACGGGT$ GAGCTGTCGGGGTCCAGGCAGTGCTCAGTGGTGAGAGCCACAGCACATTTGAAAGTCCACATGTGTTTGCCCCAC TGTGGTCCAGGACATGTGTGAGCCACACTCAGTGGACTTGCACCTGTGACATGTTGGTCAGCGTGGCGGCCGTCA GCTGGGTGTGGAATGCATCTGATTGGAGCCTGGCACCCGGCCTACCATGATTGTGATTCTCTGGGGCGAGTCCTG AGTGTGGGCAGGCCTCAGGCCCCCAAGAGGGCTGTGAGCAGGCACCTTCCTGTGAGGCACGATGCCACCATGTG TGCCGGCCATGTTCCCTCTGCCCAGTCATGTTGACAATTGTGGCCAAATTCAACATCGGGCCTGTTTCCTGCACC CACGTTGGCACACTGAGTTCAAGACAGTTTCTGCAGAAATGAATCCAGAGGTGTTTATTTCTGGCACGTTGGA AACAGGGAAATGAAAGACTTTCCTCAATAAGAAATGGGACTTTCTCACGCTGGATGGCACAGAGCTGGCAAACAT GAGGCCAGTCCACACCAAGGCTTTGCCTGCAGAAAGGCTGCACTGTGGCCAGCGGGGGAAGCGGAGGAGACACCT GTGGACACCCTCCCCACAGGTGGGCACACCTTTGCGCAGGCCCAGTGTGCGTTCTGAAGGAGAGCCCAGGGTGGG GTTCCGGGACTGAGGTGCAGCCGTGTCCAGGGTGGGCTTCTAGCTCTGCCGCTGGGCGGAACTGGGGTAGGTCCC AGGGTGGGGTTCCAGGACTGAGGTGCAGCCGTGCCCAGGGTGGGCTTCTAGCTCTGCCGCTGGGCAGAACTGGGG TAGTCCCAGGGTGGGCTTTTAGCTCTGCCGCTGGGCGGAACTCGGGTAGGTGGGAGTCCTCACTTCTCTGCAGGG TGGTGAAGCTCTCTGGGTAGTGTGAGCAGTTCTCAACGTGCACCTTGGAAAGCGCCCGTTTTGAGGTTTAGCTGT GGCCAAGATAGATGACTTCATTTTGTTGCTTTTTGTTCTTAACATGGGGAGATATTTAGAAAACATGTTTGGCTC TTGCTGGGGAAGCAGTGCTGTTCCGTACAGTGTTTTACAAGCCGTGTTTCCTTAGGATTGAAAGAAGGTGGCAAG AGGAAGAAGCAGAAGCAGAGAGAGGAGTCGAAGAAGAAGTCGACCAAAGGCAATCACTAGACCGGACTTGAG GCACGCGGTGCACCCCAGACGCTGGCGCTCCACCGTGCTCGGCATGCGGTCGTGCACACGCGCTAGGTAGCAGC GAGACGGGGCTGACGGCACGGGTGGCGGGACAGACGTTTGGGACTTGGCCGCGACTCTCTGCTTCTCCAGCT CTCAATCTGCTGCATTTTCCTCTAGTGCTTCCGGATCCTCTTCATTCTTTTCGGCTACTCAACCACTCCGCATGC TGCTGGAATATTTCTGGCTTTAGAAGTACAGGAGGGCGCAGATGGCTAACTGAGTAACATTCATGAAATGAGGCT TTCTGTGGCGGCGTAGTGTTTGGAATTAGAAGGTAATTCAGTAGAGTGTAACTTAGAGAATATTGCAAGTGACAC ATTGAATCCTGCCCGTCAGGGCACCTTTTCCTCAGAGCAATCCGGCCACACGAATAGAAGGCTGTCGTGAATCAC ATCAGATGTAAAATCATTCCTTCTGTTTACTCTTTTAATTTTCATCCTTTGCAGGTAGTGCAAATTCAACTTCAA ATATGGTGTAGGTTTTGCTAGATTCCATATTTTTTTCTTGGATTTTTTGCTAATTATTTTTAGCAAAAAATTTTTTG ${\tt AAACACCCAGAGACGCACAAGGAGGTTGAACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTTCAGTTCGCGAACATTGACTCCTTACGAAAGTCACTCATGTTCAG$ TCATTCTAACTAGATGCGCCCACTTCCGGTCATTATTTCGTTTGCATGATGTATTGCTTCTTCACGTTTTGTTTT CTTTCACATGAGGATCTGCCGTTCATGTTGCTTTCTCCTTTTGTCCTCTTGGACTTGAGGGCATTGTGAAAAGCTT TGCTGTGATTTAAAAATGCCAGCAATTTTAATCTAGCAGTGTTGAAGCTGGGAATTTTTTTGGCGCAATCCATGTA GGCTTTGTTTATTTGGTTTTTGGCGGGGAGAGGAGTGGTATTTGATGCTTTCTGTGGACAATGTAACCCTAAACAC ATCATGTATTTTAAATGCCACCTACATAAATAAAACATAAGCATATTGAATAC

CTAAGACAGGTGCAGACGTATGTCGGCTTTGGCGTATCCATCAAGCTTTATATTGCTTTGATTATGATTTGGAGG GATTTCTTAGTTGTCTCTTCAACTGGAATATCAACTTCATCAAAATGATCCACGGGACCATTAAAAACCAGTTAC TACTGGAGGCGATTGAAAATGATTGCATCCAGGACTTCATGTTTCACGGGATACACCTTCCGAGGAGGTCTCCAG TTTATAGATTATATAAGCCCATCCTTTGGAGAGGATTAAAGGCCAGAAACTCTGAAGTTCGATCAAATGCTGCAT TGTTGTTTGTTGAAGCATTTCCTATTAGGGATCCAAACCTTCATGCTATTGAAATGGATAGTGAAATCCAGAAAC AGTTTGAAGAGCTCTATAGCCTTTTAGAAGATCCTTACCCGATGGTCCGTTCCACAGGGATCCTTGGTGTTTGTA AAATAACTTCTAAGTACTGGGAAATGATGCCCCCGACCATTCTTATTGACCTCCTGAAGAAGGTGACTGGGGAAC TGGCATTTGACACGAGCTCAGCTGATGTTCGTTGTTCTTTTAAGTGTCTGCCAATGATTTTGGACAACAAAC TGAGCCACCCATTGTTAGAGCAGCTCCTTCCAGCTCTCAGATACAGTCTCCACGACAATTCGGAGAAAGTGAGGG TAGCTTTTGTGGACATGCTGTTGAAGATCAAAGCTGTGAGGGCTGCTAAGTTTTGGAAAATATGTCCCATGGAGC ACATTCTGGTTCGTCTGGAAACTGATTCTCGACCTGTGTCTCGGCGCCTGGTGAGCCTCATCTTTAATTCTTTCC TGCCTGTGAATCAGCCGGAGGAGGTCTGGTGCGAGCGCTGTGTCACCCTGGTGCAGATGAACCACGCCGCTGCCA GGAGGTTCTATCAGTACGCCCACGAACACACCGCCTGCACCAACATAGCAAAGCTGATTCACGTTATTCGTCATT TGATTCTCTGGAAAAGTATTGACAGAAGTATGGAAAATAATAAAGAGGCCAAACTTTACACGATTAACAAGTTTG $\verb|CCTCTGTGCTTCCAGAGTATCTGAAAGTATTTAAGGATGATCGCTGCAAGATCCCTTTATTCATGCTAATGTCCT|\\$ TTATGCCGGCCTCTGCTGTCCCCCCATTCAGCTGTGGTGTGATTTCCACGCTGAGAAGCCGGGAGGAGGGCGCTG TGGACAAGAGCTACTGCACTTTGTTGGATTGCCTCTGCTCCTGGGGGCAAGTGGGGCACATTCTGGAGCTTGTTG CACGCCCAGTCAAACCTGAATTGGCATTGGTCTACATTGAGTATCTGCTGACTCATCCAAAGAACCGCGAGTGCT TGCTCTCTCGCTCCTCGGAAGAAACTTAACCATCTTTTGAAAGCCCTTGAAACGTCAAAGGCAGATCTGGAGTCAC TTCTGCAGACACCGGGTGGGAAGCCTCGTGGCTTCAGTGAAGCAGCTGCCCCGCGAGCCTTTGGTCTCCACTGTC GCCTGAGCATCCATCTTCAGCACAAGTTCTGCTCAGAAGGAAAGGTGTATTTGTCCATGTTGGAAGACACTGGCT TTTGGTTAGAAAGCAAAATTTTATCTTTTATTCAAGATCAAGAAGAAGACTACCTGAAGCTTCATAGGGTCATTT ATCAGCAAATTATCCAGACCTACCTGACTGTGTGTAAAGATGTTGTTATGGTAGGCCTTGGTGACCATCAGTTTC AGATGCAACTCTTACAGCGGAGTCTTGGAATCATGCAAACAGTGAAGGGATTTTTTTATGTTTCATTACTTCTTG ACATTCTGAAAGAGATAACTGGAAGTTCCTTGATTCAGAAAACAGATTCAGATGAAGAAGTTGCAATGCTGTTGG ACACAGTCCAGAAAGTATTTCAGAAAATGTTGGAATGTATTGCACGGAGCTTCAGGAAGCAGCCGGAAGAAGGCC ${\tt TGCGGCTGCTTTATTCTGTTCAGAGGCCTCTTCATGAGTTCATTACTGCTGTTCAGTCTCGGCACACAGACACCC}$ CTGTGCACCGGGGTGTACTTTCTACTCTGATCGCTGGGCCTGTGGTTGAGATAAGTCACCAGCTACGGAAGGTTT CTGACGTAGAAGAGCTTACCCCTCCAGAGCATCTTTCTGATCTTCCACCATTTTCAAGGTGTTTAATAGGAATAA TAATAAAGTCTTCGAATGTGGTCAGGTCATTTTTGGATGAATTAAAGGCATGTGTGGCTTCTAATGATATTGAAG GCATTGTGTGCCTCACGGCTGCTGCATATTATCCTGGTTATTAATGCAGGTAAACATAAAAGCTCAAAAGTGA GGGAGGTTGCAGCCACTGTTCACAGAAAACTAAAGACATTCATGGAAATTACTTTGGAAGAGGATAGCATTGAAA GATTTCTCTATGAATCATCATCAAGAACTCTGGGAGAACTTTTGAATTCA<u>TAA</u>CCAAGCCAACATCTCCAGACAT GTAAAAATAGGGAAAAGTGATTCAAATTGAAATGCCTGTGTATTTTCCTATTGTTTTTAATGTTAATAACCCATA

MLLECFININYIKKEEGRRFLSCLFNWNINFIKMIHGTIKNQLQGLQKSLMVYIAEIYFRAWKKASGKILEAIEN DCIQDFMFHGIHLPRRSPVHSKVREVLSYFHHQKKVRQGVEEMLYRLYKPILWRGLKARNSEVRSNAALLFVEAF PIRDPNLHAIEMDSEIQKQFEELYSLLEDPYPMVRSTGILGVCKITSKYWEMMPPTILIDLLKKVTGELAFDTSS ADVRCSVFKCLPMILDNKLSHPLLEQLLPALRYSLHDNSEKVRVAFVDMLLKIKAVRAAKFWKICPMEHILVRLE TDSRPVSRRLVSLIFNSFLPVNQPEEVWCERCVTLVQMNHAAARRFYQYAHEHTACTNIAKLIHVIRHCLNACIQ RAVREPPEDEEEEDGREKENVTVLDKTLSVNDVACMAGLLEIIVILWKSIDRSMENNKEAKLYTINKFASVLPEY LKVFKDDRCKIPLFMLMSFMPASAVPPFSCGVISTLRSREEGAVDKSYCTLLDCLCSWGQVGHILELVDNWLPTE HAQAKSNTASKGRVQIHDTRPVKPELALVYIEYLLTHPKNRECLLSAPRKKLNHLLKALETSKADLESLLQTPGG KPRGFSEAAAPRAFGLHCRLSIHLQHKFCSEGKVYLSMLEDTGFWLESKILSFIQDQEEDYLKLHRVIYQQIIQT YLTVCKDVVMVGLGDHQFQMQLLQRSLGIMQTVKGFFYVSLLLDILKEITGSSLIQKTDSDEEVAMLLDTVQKVFQKMLECIARSFRKQPEEGLRLLYSVQRPLHEFITAVQSRHTDTPVHRGVLSTLIAGPVVEISHQLRKVSDVEELT PPEHLSDLPPFSRCLIGIIIKSSNVVRSFLDELKACVASNDIEGIVCLTAAVHIILVINAGKHKSSKVREVAATVHRKLKTFMEITLEEDSIERFLYESSSRTLGELLNS

CGGGACGGAGGGGCCCCCCGCGCTCGGGGCGCTACAGCTGCGGGCCCGAGGTCTCCGCGCACTCGC TCCCGGCCCATGCTGGAGGCGGCGGAACCGCGGGGACCTAGGACGGAGGCGGCGGCGCGGCGGCCCCCGGCA CGCTGAGCTCGGGATGCGGACGCTGCTGCCTCCCGCGCTGCTGACCTGCTGGCTCGCCCCCGTGAACAGCAT TCACCCAGAATGCCGATTTCATCTGGAAATACAGGAGGAAGAAACAAAATGTGCAGAGCTTCTGAGGTCTCAAAC AGAAAAACACAAAGCCTGCAGTGGCGTCTGGGACAACATCACGTGCTGGCGGCCTGCCAATGTGGGAGAGACCGT CACGGTGCCCTGCCCAAAAGTCTTCAGCAATTTTTACAGCAAAGCAGGAAACATAAGCAAAAACTGTACGAGTGA CGGATGGTCAGAGACGTTCCCAGATTTCGTCGATGCCTGTGGCTACAGCGACCCGGAGGATGAGAGCAAGATCAC GTTTTATATTCTGGTGAAGGCCATTTATACACTGGGCTACAGTGTCTCTCTGATGTCTCTTGCAACAGGAAGCAT AATTCTGTGCCTCTTCAGGAAGCTGCACTGCACCAGGAATTACATCCACCTGAACCTGTTCCTGTCCTTCATCCT GAGAGCCATCTCAGTGCTGGTCAAGGACGACGTTCTCTACTCCAGCTCTGGCACGTTGCACTGCCCTGACCAGCC ATCCTCCTGGGTGGGCTGCAAGCTGAGCCTGGTCTTCCTGCAGTACTGCATCATGGCCAACTTCTTCTGGCTGCT GGTGGAGGGCTCTACCTCCACACCCTCCTGGTGGCCATGCTCCCCCCTAGAAGGTGCTTCCTGGCCTACCTCCT GATCGGATGGGCCTCCCCACCGTCTGCATCGGTGCATGGACTGCGGCCAGGCTCTACTTAGAAGACACCGGTTG CTGGGATACAAACGACCACAGTGTGCCCTGGTGGGTCATACGAATACCGATTTTAATTTCCATCATCATCATCTAATTT TGTCCTTTTCATTAGTATTATACGAATTTTGCTGCAGAAGTTAACATCCCCAGATGTCGGCGGCAACGACCAGTC TCAGTACAAGAGGCTGGCCAAGTCCACGCTCCTGCTTATCCCGCTGTTCGGCGTCCACTACATGGTGTTTGCCGT GTTTCCCATCAGCATCTCCTCCAAATACCAGATACTGTTTGAGCTGTGCCTCGGGTCGTTCCAGGGCCTGGTGGT GGCCGTCCTCTACTGTTTCCTGAACAGTGAGGTGCAGTGCGAGCTGAAGCGAAAATGGCGAAGCCGGTGCCCGAC CCCGTCCGCGAGCCGGGATTACAGGGTCTGCGGTTCCTCCTCTCCCGCAACGGCTCGGAGGGCCCCTGCAGTT CGCGGCGGGAGGCCCACGGTTCGGGGGCTTCTGCGGGGCTGAGACGCCGGCTTCCTCCTTCCAGATGCCCGAGCAC CGTGTCGGGCAGGTCAGCGCGGTCCTGACTCCGTCAAGCTGGTTGTCCACTAAACCCCATACCTGG

2686/6881 FIGURE 2470A

GTGAACCGTGCATGTGAGGGATCTAGGTTGCGCTATCCTTATGAGAATCTAATACCTATTGATCTGTCACTTTCT CCCATCACGCTCAGGTGGGACCATCCAGTTGCAGGAAAACAAGCTTAACACGCCCACTGATTCTACATTATGCTC CTACCTCCCAGCAGCCTCTCCAGGCCCAGAACTTTCTCCAGTCAGCCTCTACAGACCAAGCTCATGACTCACAAT GGCCTATTTAGGCCCATACCCTACCTCACGGCAGTCTCCGCAGATGAGCCTACTGCCTCACAACAGCCTCCACAG GCACAGCTCCATCGTTACAATGGCCTCTTTAGACCCAGCTCCTGCCTCCCAGCCTTCTCTCCAGGCCCTGAACTT TCTCAAGTCGACCTCACCAGGCCCAGCTCATGCTTCTTTGCAGCCTCTCCAGGCCCAGCTCCTGCATCTTGGTGG CACCTCCAGGCCCAGCCTCTGCCTCCCGTCGGCCTCTACAATCCCAACATCTGCCTCACAGCAGATTCTTCAGGC CCAGCATCTGCCTCACTGTGGACCCCCAAGCCAAGCTCCCAACCTTTCAGCAGCTTCTACACACCCCAACTCCTG CCACCCAGTGGCCTCTTTAGGCCAAGCTCATGCTTCACAAGGGCCTTTCCAGGCTCAACTTTTGTCTCATGGCAA ACATCCAGCTCATGCCTCACGGTGGCCTCTCCAGGCCCAACTCCTGTCCCAGGACGTCATCTCCGGGCCCAAAAC TTACTCAAGTCAGACTCTCTAGTCCCAACTGCTGCCTCCTGGTGGCCTATGAAGGCCCAAAATCTCCTCAAGTGG ACCTCTCCAGGCCCAGCTCCTGCCTCTGTCAGCGTCTACAGGCCCAACCTCTGCCTCATGGGGGCTTCTCCAGG $\verb|CCCACCTCTTCCTCTTGGCTGGGTCTACAGGCACAACTGCTGCCTCACAACAGCCTTTTTTGGCCCAGTTCCTCT|\\$ CCAGCTCATGGCGGCCAATGTAGGCCCAAAACTTCCTCAAGTCAAACTCTCCAGGCCCACCTTCTGCTTCGCGGT GGCATGAACAGGCCCAGCTTTGACTTGAGAACAGCCTCTGCAGGCCCTGCTCTTGCCTCCCAGGGGCTTTTTCCA $\tt CTCCTCCCTCACAGTGGCCCATTTAGGCCCAACTCATGACTGTCGGGCCATTTCCAGGCCTAGTGCCTGCTTCGT$ GGCTGACTCTTGAAGCCCAAAACTTCCTCAAATCAGCCTTTTGCCCAACTTCTGTCTACTGTCGGACTCTACAGG CTTTCCGCAGCCTCTACAGGCCCAGCTCCTGCCTTGCAGTGGCCTCTTTAGGCCAAGCTCATGCCCCATGGCGAC TTTTCCAGGCACAGCTTTTGCCTTTTGCAGCCTGTCCAGGCCCAGAATGTCCTTAACTCGGCATCTCCAGGATGA GCTCATCCTCCCAGTGCGTCTACAGGCCCGTCTCCTGCCTCACAACAACCTCCTTTGGCCCAACTCCTGCTGAGC TGCTGGCAGCCTCTGTAGGCCACAGAATTCTTAAGGTAAAGCTTTCCAGGCCCACCTTTGGCCTCCCGGCAGGCT CAGCAATCAAACTATTCCCTCACTGCGGCCACCGAAAGCCAAGTTTCTCCCTGCCTCACGGCATCCTCCGAAAAC TCTCTTTAGGCCCAGCTCATGCTAAAAGATGGACTCTCCAGGCACAGCTCTTGCCTCCTGGCAGCCTCTGCAGGC CCAAATTCTCCAAAAGTTGGCCTCCTAACTCAGCTCCTGCCTCATGTCGGCCTACACAGGCCCAGACTCTTAC CACACAGTAGACCCTCCAGGCCCACCACTTGCCTGATCATAGCCTCCTAAGGCCAAGCTCCTGCCTTTCGGCAGC CTCTACAGGCCAAGCTCCTGCCTCGCAATTGCCTCTGTAGGCCAAGATCATGCCGTGAAGTGGCCTTCCCTAGCC TAACTTTTGCTTTTTGACGCATACTCCAGTCCCAAAACTTCCTCCAGTCAGCCGGTCCAGGCCAAGCTCTTCCTC CCAAAGGCTTCTGCAGGCCAAAATCATCCTGAAGTCACCCTCTGCAGGCGCAGCTCCTGCCTCCAAGTGCTGTGT AGGCCAAGCTAATGCCTCACAGCACACTTTCCAGGCTGAGCATTTCCTTTTGTGCATCCTCTCCAAGCCCTGAAC TTACTCCAGTTGGCCTCTCCAGACCAAGCTCTCCCTCCCAGTGGCCTCTACAGGCCAAAATTGTCCTCAGGTCAG CCTCTCCAGGGCCAACTCCTAGCTACCGGTGGCTTCTGCAGGCCAAAATCGACCTCAAGTCAGCCTCTTCACACC CAGCTCTTGCCTCTGAGTGGCCTCTCCAGGAGCAAAACTTTCTCAAGTCGGCCTCTCCAGGCCCAGCCTCCTGCT TCCCGAGGGCATGTACAGGCCCAGCCTCTGCCTCACAGCAGACTCTTCACACCCAGCTCTTCCCTGTCTGCGGCC GCCCAACTCATGCCTCTTGCAACGTGCCCAAGTGTCAGCTCCTGCCTCACACTGGCCTGTTGAGGCCCAGCTCAT GCCTCTCGTGGCCTCAACGGGCCCATCCCCTGCCTGTCGGCGGCCTCTACAGGCCCGGCCTCTACCTCACAGTGG CAGCTCCTGCCTCCCAGTGGCCTGCCTGGCCAAGCCCGTGCCTCAGGGCAGCCTTTCCAGGCCTAGCGTTTGCT GCTTTGCATCCTCCAGGCCCTGGACTTCCTCCAGTCGGCCTCTCCAGGCCCAGCTCTTCCTCTCGGCGGCCTC TGCAGGCCCAGACTGTCGTCAAGTCGGCCTGTCCAGGGCCAGCTCCTGCCTCCCGGCGGCCTCTGCAGGCCCAAG TCGTCCTCAAGTTGGCCTCCCCAGGCCCAGCAACGGCCTCTCGGCGGCCTTTCCGGGTGCAAAAGTTCCTCGAGT CAGCCTCTCCAGGCCCAGCTCCTCCTGCCTCCCAGTGGCCTCTTTCGGCCCAGCCCAGCTCATGCCTCCCGGCGG CCTTCCCAGGCCCTGCTTTTGACTTTCGGTGGCCTCTGCAGGCCTCGACAAGGCCAGGCCTCCTGCCTCCCAAAG

FIGURE 2470B

 $\label{thm:constraint} $$\operatorname{GAGTCCAAAGCTCCTGCCTTCAGCCGCTTCGGCAGGCCCAGCTCCCGCCTGCCAGTGGCCTCTTCAGGCCCATG}$$$\operatorname{GGGCTCATTCCTCACAACGGCCTTTCCAGGCCCAGTTTTTCCCTTCCGGCGGCCTCTTGGCCTCTAATTTGTTTA}$$$\operatorname{TCTTTTGGGTATAAATCCCAAAATATTGAATTTTGGAATATTTCCACCATT}$$

ATGTTGCCAATAACACAGATGAAGAGACTGGGGGATGGCACTATCACTGCTGCTGTACTGAAGGTTAGCAAAGGT
GCTAATCCAGTGGAAATCAAGAGAGAGTGTGATGTTAGCTGTTGATGCTGTAATTGCTGAACTTAAAAAGCAGTCT
AAACCTGTGACCAAACCTGAAGAAATTGCACAGGTTGCTACAATTTCTGCAAATGGAGACAAAGAATTGGTAAC
ATCATCTCTGATGCAATGAAAAAGTTTGGAAGAAAAGGGCATCATCACAAAAAATTTCTAGTGTCCAGTCCATTGTA
ACTGCTCTTGAAATTGCCAATGCTTACTGTAAGCCTTTGGTCATAATTGCTGGAGACATTGATGGAGAAGCTCTA
ACTACACTCATCCTGAATAGGCTAAAGGTTGGTCTTCAGGTTGTGGCAGTCAAAGCTCCAGGGTTTGGTGACAAT
AGAAAGAACCAGCTTAAAGATACGGTTATTGCTACTGGTGGAGAAGTTGGAGAAGTCACTGTGATCAAAGATTAT
GCCATGCTCTTAAAAGGAAAAGGTAACAAGTCTCAAAATTGAAAAATGTGTTCAAGAAATCATTGACCAGTCAGAT
GTCACAACTAGTGAATACGAAAAGGAAAACTGAGTGGAGAAACTTTCAGATGGAGTAGCTGTGCTGAAGCTAAT
GAAGATAAAATAATTGGTATAGAAATTATTAAAAGAACACTCCAAAATTCCAGCAATGACAATTGCTAAGAATGCA
GGTGTTGATGGATTTTTGATAGTTGAGAAAATTATTGTAA

MLPITQMKRLGDGTITAAVLKVSKGANPVEIKRGVMLAVDAVIAELKKQSKPVTKPEEIAQVATISANGDKEIGN IISDAMKKFGRKGIITKISSVQSIVTALEIANAYCKPLVIIAGDIDGEALTTLILNRLKVGLQVVAVKAPGFGDN RKNQLKDTVIATGGEVGEVTVIKDYAMLLKGKGNKSQIEKCVQEIIDQSDVTTSEYEKEKLSGETFRWSSCAEAN EDKIIGIEIIKRTLKIPAMTIAKNAGVDGFLIVEKIM

ATGTACTGGGACATCGTGTCTTTGGAGACAGCTATACCCCACTTGTCCATTCTGCTGAGGCCCACAAATGCCATC ACCCAGAAGCCCTTCACATCCACTGGGGCCACAGCAGGATACAGTCTGTTGCTGGTCCAGCAGCCTGATAAAATC ATTGTCCTCTCCACCCTGATTCCTACAGGAGACTACTCACCCCATAACCTCAAAAACCTCTTCATGAGGATGGTG ACCCCAGCCATGAGGACCCTCGCCATCCTTGCTGCCATTCTCCTGGTGGCCCTGCAGGCCCAGGCTGAGCCACTC CAGGCAAGAGGCTGATGAGGTTGCTGCAGCCCCGGAGCAGATTGCAGCGGACATCCCAGAAGTGGTTGTTTCCCTT GCATGGGACGAAAGCTTGGCTCCAAAGCATCCAGGCTCAAGGAAAAACATGGACTGCTATTGCAGAATACCAGCG TGCATTGCAGGAGAACGTCGCTATTGGAACCTGCATCTACCAGGGAAAAACTCTGGGCATTCTGCTGCTGA

MRTLAILAAILLVALQAQAEPLQARADEVAAAPEQIAADIPEVVVSLAWDESLAPKHPGSRKNMACYCRIPACIA GERRYGTCIYQGRLWAFCC

 ${\tt MRTLAILAAILLVALQAQAEPLQARADEVAAAPEQIAADIPEVVVSLAWDESLAPKHPGSRKNMDCYCRIPACIAGERRYGTCIYQGRLWAFCC}$

MQVCNCRCLSPGDLQEDGGAYWAQCSVWGAHFDPEVYLDKLHRVCPLAQLMDSETDMVRQIRAIDSDMQTLVYEN YDKETIGVQPGWGGEEVQGLARAGLATGKGQRPPGPGQVRAAQSRARRVRAARERPAEGAREPGAARGGARASRM PSSAPRGPNEPALRRPSSAERPLAPGRAPGAMASPSGSSEATGKPRGRDGRPRREEDDVPPEEKRLRLLLEGGSA QPEDCEDGEDALRPGREETGT

GAGAGTCGCCCCGGGAGTCCGCCGCCTGCGCCAGGATGGAGTTCGTGAAATGCCTTGGCCACCCCGAAGAGTTC TACAACCTGGTGCGCTTCCGGATCGGGGGCAAGCGGAAGGTGATGCCCAAGATGGACCAGGACTCGCTCAGCAGC AGCCTGAAAACTTGCTACAAGTATCTCAATCAGACCAGTCGCAGTTTCGCAGCTGTTATCCAGGCGCTGGATGGG GAAATGCGCAACGCAGTGTGCATATTTTATCTGGTTCTCCGAGCTCTGGACACACTGGAAGATGACATGACCATC AGCAAGGAGAAGGATCGCCAGGTGCTGGAGGACTTCCCAACGATCTCCCTTGAGTTTAGAAATCTGGCTGAGAAA TACCAAACAGTGATTGCCGACATTTGCCGGAGAATGGGCATTGGGATGGCAGAGTTTTTGGATAAGCATGTGACC TCTGAACAGGAGTGGGACAAGTACTGCCACTATGTTGCTGGGCTGGTCGGAATTGGCCTTTCCCGTCTTTTCTCA GCCTCAGAGTTTGAAGACCCCTTAGTTGGTGAAGATACAGAACGTGCCAACTCTATGGGCCTGTTTTTTGCAGAAA ACAAACATCATCCGTGACTATCTGGAAGACCAGCAAGGAGGAAGAGAGTTCTGGCCTCAAGAGGTTTGGAGCAGG TGTGCTATTCCACAGGTGATGGCCATTGCCACTTTGGCTGCCTGTTATAATAACCAGCAGGTGTTCAAAGGGGCA TATCAGTATATGGAAGAGATTTATCATAGAATCCCCGACTCAGACCCATCTTCTAGCAAAACAAGGCAGATCATC TCCACCATCCGGACGCAGAATCTTCCCAACTGTCAGCTGATTTCCCGAAGCCACTACTCCCCCATCTACCTGTCG TTTGTCATGCTTTTGGCTGCCCTGAGCTGCCAGTACCTGACCACTCTCTCCCAGGTAACAGAAGACTATGTTCAG ATGGATGTTGTGTTCTCTTTATTTTTTCCTACTACTTTAATCCCTAAAAGAACGCTGTGTGGCTGGGACCTTTA GGAAAGTGAAATGCAGGTGAGAAGAACCTAAACATGAAAGGAAAGGGTGCCTCATCCCAGCAACCTGTCCTTGTG GGTGATGATCACTGTGCTGCTTGTGGCTCATGGCAGAGCATTCAGTGCCACGGTTTAGGTGAAGTCGCTGCATAT GTGACTGTCATGAGATCCTACTTAGTATGATCCTGGCTAGAATGATAATTAAAAGTATTTAAATTTG

GTGGTGCGACCACGGCTCACGGCAGCCTCAGCCACCCAGATGTAAGCGATCTGGTTCCCACCTCAGCCTCCCGAG ${\tt TAGTGGATCTAGGATCCGGCTTCCAAC} {\tt ATG} {\tt TGGCAGCTCTGGGCCTCCCTCTGCTGCTGCTGGTGTTGGCCAAT}$ GCCCGGAGCAGGCCCTCTTTCCATCCCCTGTCGGATGAGCTGGTCAACTATGTCAACAAACGGAATACCACGTGG CAGTGTCCCACCATCAAAGAGATCAGAGACCAGGGCTCCTGTGGCTCCTGCTGGGCCTTCGGGGCTGTGGAAGCC ATCTCTGACCGGATCTGCATCCACACCAATGCGCACGTCAGCGTGGAGGTGTCGGCGGAGGACCTGCTCACATGC TGTGGCAGCATGTGTGGGGACGCTGTAATGGTGGCTATCCTGCTGAAGCTTGGAACTTCTGGACAAGAAAAAGGC CTGGTTTCTGGTGGCCTCTATGAATCCCATGTAGGGTGCAGACCGTACTCCATCCCTCCTGTGAGCACCACGTC AACGGCTCCCGGCCCCATGCACGGGGGGGGGGGAGATACCCCCAAGTGTAGCAAGATCTGTGAGCCTGGCTACAGC CCGACCTACAAACAGGACAAGCACTACGGATACAATTCCTACAGCGTCTCCAATAGCGAGAAGGACATCATGGCC GAGATCTACAAAAACGGCCCCGTGGAGGGAGCTTTCTCTGTGTATTCGGACTTCCTGCTCTACAAGTCAGGAGTG TACCAACACGTCACCGGAGAGATGATGGTGGCCATGCCATCCCGCATCCTGGGCTGGGGAGTGGAGAATGGCACA CCCTACTGGCTGGTTGCCAACTCCTGGAACACTGACTGGGGTGACAATGGCTTCTTTAAAATACTCAGAGGACAG GCCGTGGGCCTGTCGTGCCAGTCCTGGGGGCGAGATCGGGGTAGAAATGCATTTTATTCTTTAAGTTCACGTAAG ATACAAGTTTCAGACAGGGTCTGAAGGACTGGATTGGCCAAACATCAGACCTGTCTTCCAAGGAGACCAAGTCCT ${\tt GGCTACATCCCAGCCTGTGGTTACAGTGCAGACAGGCCATGTGAGCCACCGCTGCCAGCACAGAGGCGTCCTTCCC}$ GGGAGCAAGACAGAGACGCAGGAATGGAAAGCGGAGTTCCTAACAGGATGAAAGTTCCCCCATCAGTTCCCCCAG TACCTCCAAGCAAGTAGCTTTCCACATTTGTCACAGAAATCAGAGGAGAGACGGTGTTGGGAGCCCTTTGGAGAA CGCCAGTCTCCCAGGCCCCTGCATCTATCGAGTTTGCAATGTCACAACCTCTCTGATCTTGTGCTCAGCATGAT ·TCTTTAATAGAAGTTTTATTTTTTCGTGCACTCTGCTAATCATGTGGGTGAGCCAGTGGAACAGCGGGAGACCTG TGCTAGTTTTACAGATTGCCTCCTTATGACGCGGCTCAAAAGGAAACCAAGTGGTCAGGAGTTGTTTCTGACCCA CTGATCTCTACCACAAGGAAAATAGTTTAGGAGAAACCAGCTTTTACTGTTTTTGAAAAATTACAGCTTCAC CCTGTCAAGTTAACAAGGAATGCCTGTGCCAATAAAAGTTTTCTCCAACTTGA

WO 2004/030615 PCT/US2003/028547

2701/6881 FIGURE 2484

MWQLWASLCCLLVLANARSRPSFHPLSDELVNYVNKRNTTWQAGHNFYNVDMSYLKRLCGTFLGGPKPPQRVMFT EDLKLPASFDAREQWPQCPTIKEIRDQGSCGSCWAFGAVEAISDRICIHTNAHVSVEVSAEDLLTCCGSMCGDGC NGGYPAEAWNFWTRKGLVSGGLYESHVGCRPYSIPPCEHHVNGSRPPCTGEGDTPKCSKICEPGYSPTYKQDKHY GYNSYSVSNSEKDIMAEIYKNGPVEGAFSVYSDFLLYKSGVYQHVTGEMMGGHAIRILGWGVENGTPYWLVANSW NTDWGDNGFFKILRGQDHCGIESEVVAGIPRTDQYWEKI

CTGGGAAGCAGAGTGTCTGGATGGAACCTGAGCTGGGTCTCTGACTCACTTCTGACTTTAGTTTTTCAAGGGGG AAACCTCTCCAGAGCCTAGCAGAATTTTCTGTTTATTGTGACATGTCCGATGGAGGAGGATGGACTGTAATTCAG ${\tt AGACGATCTGATGGCAGTGAAAACTTTAACAGAGGATGGAAAGACTATGAAAATGGCTTTGGAAATTTTGTCCAA}$ AAACATGGTGAATATTGGCTGGGCAATAAAAATCTTCACTTCTTGACCACTCAAGAAGACTACACTTTAAAAATC GACCTTGCAGATTTTGAAAAAAAAAAAGCCGTTATGCACAATATAAGAATTTCAAAGTTGGAGATGAAAAGAATTTC ${\tt TACGAGTTGAATATTCTGGAACAGCTGGAGATTCCCTTGCGGGGAATTTTCATCCTGAGGTGCAGCTGCAGGTGCAGGTTGAGGTTGCAGGTTGAGGTTGCAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTGAGGTTGCAGGTTGAGGTTGAGGTTGAGGTTGCAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGTTGAGGT$ TGGTGGGCTAGTCACCAAAGAATGAAATTCAGCACGTGGGACAGAGATCATGACAACTATGAAGGGAACTGCGCA GAAGAAGATCAGTCTGGCTTGTGGTTTAACAGGTGTCACTCTGCAAACCTGAATGGTGTATACTACAGCGGCCCC ${\tt TACACGGCTAAAACAGACAATGGGATTGTCTGGTACACCTGGCATGGGTGGTATTCTCTGAAATCTGTGGTT}$ ATGAAAATTAGGCCAAATGATTTTATTCCAAATGTAATT<u>TAA</u>TTGCTGCTGTTGGGCTTTCGTTTCTGCAATTCA GCTTTGTTTAAAGTGATTTGAAAAATACTCATTCTGAACATATCCATGCGCAATCATGATAACTGTTGTGAGTAG TGCTTTCATTCTCCACTTGCCTTTGTTACTTAATGTGCTTTCAGTACAGCAGATATGCAATATTCACCAAAT AAATGTAGACTGTGTT

GGGACAGAGGAGACAAGATGGCGCTGCGGGCGATGCGGGGGATTGTCAACGGGGCCGCACCCGAGCTACCCGTGC TCACATACAAGACAGTATCTGGAGTCAATGGTCCACTAGTGATCTTAGATCATGTTAAGTTTCCCAGGTATGCTG AAATTGTCCATTTGACCTTACCGGATGGCACAAAGAGAAGTGGGCAAGTTCTGGAAGTTAGTGGTTCCAAGGCAG TAGTTCAGGTATTTGAAGGGACTTCAGGTATAGATGCTAAGAAAACGTCCTGTGAGTTTACTGGGGATATTCTCC GAACACCGGTGTCTGAGGATATGCTTGGTCGGGTATTCAATGGATCGGGAAAACCCATTGACAGAGGTCCTGTTG TACTGGCCGAAGACTTCCTTGATATCATGGGTCAGCCAATCAACCCTCAATGTCGAATCTACCCAGAGGAAATGA TTCAGACTGGCATTCGGCCATCGATGGGATGAACAGTATTGCTAGGGGGGCAGAAAATTCCTATCTTCTGCTG CTGGGCTACCACACAATGAGATTGCAGCTCAGATCTGTCGCCAGGCTGGTTTGGTAAAGAAATCCAAAGATGTAG TAGACTACAGTGAGGAAAATTTTGCAATTGTATTTGCTGCTATGGGTGTAAACATGGAAACTGCCCGGTTCTTCA AATCTGACTTTGAAGAAAATGGCTCAATGGACAATGTCTGCCTCTTTTTGAACTTGGCTAATGACCCAACCATTG AGCGAATTATCACTCCTCGCCTGGCTCTAACCACAGCTGAATTTCTGGCGTACCAATGTGAGAAACATGTATTGG TTATTCTAACAGACATGAGTTCTTATGCTGAAGCACTTCGAGAGGTTTCAGCAGCCAGGGAAGAGGTACCTGGTC GACGAGGTTTTCCAGGTTACATGTATACAGATTTAGCCACGATATATGAACGCGCTGGGCGAGTGGAAGGGAGAA ACCAGCTAGTATGCGTGCTATGCTATTGGAAAGGATGTGCAAGCCATGAAAGCTGTCGTTGGAGAAGAAGCCCTT ACCTCAGATGATCTTCTCTACTTGGAATTTCTGCAGAAGTTTGAGAGGAACTTCATTGCTCAGGGTCCTTACGAA AATCGCACTGTCTTTGAGACTTTGGACATTGGCTGGCAGCTACTCCGAATCTTCCCCAAAGAAATGCTGAAGAA ATCCCTCAGAGCACCCTCAGCGAATTTTACCCTCGAGACTCTGCAAAGCATTAGCTGCTGCTTCTGCATTGCTCC GCGCTCTTGTGAAATACTGGTTCTGTTTTCTTTATTCCTTTTGCACTCTCGGTTCCCACCTTTGTGTTTGGAGTTT ACCATGTTACCCTGTAATTAAAAACAAAGAATAGGTAACATATTGTGCCAGTGTTGCAACGTTTTAAACTGCTAA CAGACCTTAAAATATCCCCCTACCTGGGTCCTCAGTGCTATGTTTAAAGTGCTGCAGGGATGGAGTGGCGTTTTC CTTACCTCTCAACTCCCTCAAGAGTACCAGTCTCTGAAGTTATAATGCTTTGGTCTCTACATTAGGGGCAAGATC CAGTCTGAGAGAGTCTCCTTTGAGAAGGGCCAAGAGGCTCTTTCCTGAGTGTTTGCTTTCGGTTTGTTGGTATG ${\tt CCTGTATTGCTGGGCTGTCTCCTAAACAGCAGATGGTTTTGACTGTCTTTTTGCTCTTTTCCTATATAATGAA}$ TAGATGAGTGAAAGGAGTTTTCTTTTTCTCTTTAGTACTTACGTATTGGGATTCCTGTGTCTTACAGCTCTCCCT TGGTGATCCTTACTGGGTTTCCAAGCAGAGGAGTCACATGATTACAATTGCCAGTAGAGTTGTTTTTTGGGGTAC **AAGATGAGAAGAAAGAAAACCTACAGCCTTTCTACATTCTGACATGCTAACAGTGGTTTAAGTTTCTAAAGTGT** TTACCAGATGCTGAAGGCAAGGGGAGGGAGCAGAAGCACTTATGTTTACGGATATTTTAAACTCTGTTAGAGAGC ACGATAGCATTTCCAAGCTTTAGAGTTTTCTGAATTC

2705/6881 FIGURE 2488A

CTGACATTTCACTAAAATGAGCGTGCTCAGCAGGAAGAGATGTGTTCCTCACGCTAGAAGCCACCCCGTCACATG TAGTGGTGTCCCGTTTAATGGATTCTGACATGGATTATGAAAGGCCAAACGTAGAGACCATCAAGTGCGTTGTGG TGGGGGACAACGCCGTGGGTAAGACCAGGCTCATCTGTGCCCGCGCTTGCAATGCCACCCTCACCCAGTACCAGC TGCTGGCCACGCATGTGCCCACAGTATGGGCCATCGACCAATATCGTGTGTGCCAGGAGGTGCTGGAACGCTCCC GAGACGTGGTAGATGATGTCAGCGTCTCTCTGCGCCTCTGGGACACCTTTGGAGACCACCACAAAGACCGTCGCT TTGCTTATGGGAGATCTGATGTGGTTGTTCTGTGCTTCTCCATTGCCAACCCCAATTCCCTCCACCATGTCAAGA CCATGTGGTACCCAGAAATCAAGCACTTCTGCCCCCGAGCACCTGTCATCTTGGTGGGCTGCCAGTTGGACCTGC GCTACGCTGACCTGGAGGCTGTCAACAGGGCTAGGCGACCCTTGGCTAGGCCCATCAAACCTAATGAAATCCTGC CCCCAGAGAAGGGTCGGGAGGTGGCCAAGGAGCTGGGCATCCCCTACTATGAGACCAGCGTGGTGGCCCAGTTCG GCATCAAGGACGTCTTTGACAACGCCATCCGAGCTGCACTCATCTCCCGCCGCCACCTGCAGTTCTGGAAGTCCC ACCTCCGCAATGTGCAGCGGCCTCTGCTGCAGGCACCCTTCCTACCCCCCAAGCCACCGCCCCGATCATCGTGG TGCCCGACCCTCCCTCCAGCAGCAGGAGTGCCCCGCCCACCTCCTGGAGGACCCGCTCTGCGCGGACGTCATCC TGGTGCTGCAGGAGCGGGTGCGCATCTTTGCCCACAAGATCTACCTCTCCACCTCCTCCAAGTTCTATGACC TTGACGTGTGCGAGAGCGTGGATGAGGCTGGGGGCTCCGGTCCTGCTGCTCCGTGCTTCCACCAGCGACGGA TCTTACGGGGCAACGGAACAGGGTACCTACCGGGCAGGGGTCGTGTGTCTTCCTGGAGCCGAGCTTTTGTGA GCATCCAGGAAGAGATGGCAGAAGATCCTCTCACCTACAAATCCCGGCTGATGGTGGTGGTGAAGATGGACAGTT CCATCCAGCCGGGCCCTTCCGGGCTGTCCTCAAGTACCTGTACACGGGGGAGCTAGATGAGAACGAGCGTGACC TCATGCACATTGCCCACATTGCTGAGCTGCTCGAGGTCTTTGATCTGCGCATGATGGTGGCCAACATTCTCAACA ATGAGGCCTTCATGAACCAGGAGTCACCAAGGCCTTCCACGTCCGCCGGACCAACCGGGTTAAGGAGTGCTTGG CAAAAGGCACCTTCTCAGATGTGACCTTCATCCTGGATGATGGCACCATCAGCGCCCACAAGCCCCTGTTGATTT CCAGCTGTGACTGGATGGCTGCCATGTTTGGGGGGCCCATTTGTGGAGAGCTCCACCCGGGAGGTGGTGTTTCCCT ACACAAGCAAGAGCTGCATGCGGGCCGTGCTGGAATACCTCTACACCGGCATGTTCACCTCCAGCCCCGACCTGG TGACCGGGCTGATGGAAGCGACCCAGATGATGGTGGACATCGATGGGGACGTCCTTGTGTTCCTGGAACTGGCTC AGTTCCACTGTGCGTACCAGCTGGCCGACTGGTGTCTCCACCACATCTGCACCAACTACAACAACGTGTGCCGCA AGTTCCCCCGAGACATGAAGGCCATGTCCCCAGAAAACCAGGAGTATTTCGAGAAGCATCGGTGGCCACCTGTGT GGTACCTGAAGGAGGAGATCATTACCAGCGGGCACGGAAGGAGCGTGAGAAGGAGGACTACCTCCACCTCAAGC GGCAGCCCAAACGGCGTTGGCTCTTCTGGAACAGTCCATCCTCCCCGTCTTCCTCGGCAGCCTCCTCCTCATCCC CATCTTCCTCCTCGGCTGTGGTCTGAGATGCTGCCACCCTCTTCTGACCCTGCTGCTGTTGTCCCCATCCGCCTT CACCCCTCTGCTCTTCCGCATCACCCCATCCACCTTACAGGGACCAGGGGGCCCACGTAACCAGGACCCAGAGGG TGGAGCTCTTCTTACCAGCCACCGTGGCTCAGCCAGAGAGGAGCCTGAGCCCTGTGGAGCAGAACGGGAACCACCT GCAGAGGTCCCCAGACCCAAAGCAGGACGGAGACAACTGCTTGGAGGAGCGAAGAGCCCTGGCATTTTATCTCT GGGTTTGAGAGCCCTAGAGTCAAAGGGAAAGCCTCCCAGCCTCCAGGGCTTCTCTGTGTGTCTTGGTTGCTGCTC TGGCCAGGGAGGCAGCCCCACTCCCAGCAAGCAGAAGTGATCCTCGAGGGTCCTGCCCCTGTTGGCCATATCTTT CCACCGACGGACTTGAGTGTTGCATTTGTTTTGTGGGCATTTCCACACGAAGCCTACTCACACCCTCACTGGAGA AGTCAGGGTAGAAATTGAGCCTTCAGAGCCCAACTCAAGGCTTCTACATCCTGGGGTGCAGCTGCAAAAGGCCAG ACGTGGAAAGGCCTGTATCCTGCCAGTGTCCCTCCGTCCCAGGGGGCTGTGCTGGCACAGACCTGAGAATGGGGA CACAGGTCATTCAGAGCTCCAGGCCTGGAAGCAGTGCCTCTTGGTGCAACAAGAAACTTCTCCCTCACCCCTCC CGGCGACCCCGTGCTCCTCAGGGCCCTCCCCTGCCTCTGGGTGGCCACTGCTTTTTATAGGGTGGGGCAAAATTAG CAAAGAATGAAAATCAGAAAAAGCCCCTGCCTAGCTCACATTTCTATAAACAGAGGCCCCCATGATGAGGAGGTG AAGATTTAGGTTGCAGAATCGACTCCAATGCCTTTCAGGAAAGGACTCGGCACTTCTCTGACTGCGGAGGCCCTG ACCCTGCCAGCTGGCTCCGAGGGCAACACAGGGGCCTGGCCTCTAGAGGGCTGGTGATTGAGGGGCCCGGGCTGG CGGCAAAGAGGGGTTTGGTCTCGGGGCTTAAATGGCACCAGACTCTTGCTTTTTGCCCATCTGGAGACTGCAGGCT

2706/6881 FIGURE 2488B

CCCTTCCTTACCCTCAGAGAGTGCTTATGGTGGGTGTTTTTGCGGGGCCTGCAATAGGGGCCAAAAGTCAGGGAAA GGGGCACTGACCTGTAGTGAAAGGCCACAGGACACAGCCTTATTACTGCTGGGGTGGGATAAGGGGAAGGAGAAG TGAAACTAGCTCCCAGCCCCATGGGGCAGCAGCTGGGCCACAATTGCCCCTTTCCGTTTTCTAACCCCGACTCA GATTTCACCACCCACACTCTTTTTAGGTGTAAAAGATGGAGTCCCACGGAGGAGGGGGCAGAGCCAGGAGGCAGTG GGGCTCCAGGAAAACGCTGGTTAGGCCTGGGATTGAGCTAACCTGAAACAAAGGTAGTAGGCAGGACCTAATGAC CAGAGGTTAAATCCTCATCAAGAGAGACCAGGCGGCTGGAGGACAAGCGGCTCTAACCCTGGGGGCGGCCATGTT GCGTATGCTGCCCTCTACAGGCTGCTCGGCCTCCCTGCAGCTCAGCGCAGCCCAGGGCTCCAAGTGAGGCCCAGA AGCCCATGGGCAGGGCTGGGGGGACGAAGGGGGAACCCGGAGCACCTCCACTTCTAGGGAAGATGGACAGCGTGG GGGCACACCTGGGCCTCCCGGAAGCTGTGGACGAAAGGGAGAGCGGGTCCTCCAGGGCAAGGGGAACGGGAAATA GGTCTCCTAGGTGCCTGAAGCGCTGAGCAACCTGGGTACCCTGGTGGGGATGCAGGGAAGGCCGGGGCAGAGAAA CCAACTTCAGGGACCCACCGCCCATTCCCCGAGAGCTGTCGGAACCAGATGCAACCCGGCAGCCCAGAGAACTCT GGGAAGGAGGTATGAATCCCAGTCCCCAGGAACCTAGCTCTTTAAACTCTGGGGAGTCGGATTCAGGAAACACCC GGTTTCATATTTAATTTGGTCATGGATTCATAAATACATAAGTATTTTGTAC

MDSDMDYERPNVETIKCVVVGDNAVGKTRLICARACNATLTQYQLLATHVPTVWAIDQYRVCQEVLERSRDVVDD VSVSLRLWDTFGDHKDRRFAYGRSDVVVLCFSIANPNSLHHVKTMWYPEIKHFCPRAPVILVGCQLDLRYADLE AVNRARRPLARPIKPNEILPPEKGREVAKELGIPYYETSVVAQFGIKDVFDNAIRAALISRRHLQFWKSHLRNVQ RPLLQAPFLPPKPPPPIIVVPDPPSSSEECPAHLLEDPLCADVILVLQERVRIFAHKIYLSTSSSKFYDLFLMDL SEGELGGPSEPGGTHPEDHQGHSDQHHHHHHHHHHGRDFLLRAASFDVCESVDEAGGSGPAGLRASTSDGILRGNG TGYLPGRGRVLSSWSRAFVSIQEEMAEDPLTYKSRLMVVVKMDSSIQPGPFRAVLKYLYTGELDENERDLMHIAH IAELLEVFDLRMMVANILNNEAFMNQEITKAFHVRRTNRVKECLAKGTFSDVTFILDDGTISAHKPLLISSCDWM AAMFGGPFVESSTREVVFPYTSKSCMRAVLEYLYTGMFTSSPDLDDMKLIILANRLCLPHLVALTEQYTVTGLME ATQMMVDIDGDVLVFLELAQFHCAYQLADWCLHHICTNYNNVCRKFPRDMKAMSPENQEYFEKHRWPPVWYLKEE DHYQRARKEREKEDYLHLKRQPKRRWLFWNSPSSPSSSAASSSSSPSSSSAVV

2708/6881 FIGURE 2490A

GGTCTCAGCTGAGTCTGCTCTGATCACCCAACAAGACCTAGCTCCCCAGCAGAGAGCGGCCCCACAACAAAAAGAG GTCCAGCCCTCAGAGGGATTGTGTCCACCTGGACACCATATCTCAGAAGACGGTAGAGATTGCATCTCCTGCAA ATATGGACAGGACTATAGCACTCACTGGAATGACCTCCTTTTCTGCTTGCGCTGCACCAGGTGTGATTCAGGTGA AGTGGAGCTAAGTCCCTGCACCACGACCAGAAACACAGTGTGTCAGTGCGAAGAAGGCACCTTCCGGGAAGAAGA TTCTCCTGAGATGTGCCGGAAGTGCCGCACAGGGTGTCCCAGAGGGATGGTCAAGGTCGGTGATTGTACACCCTG GAGTGACATCGAATGTGTCCACAAAGAATCAGGTACAAAGCACAGTGGGGAAGCCCCAGCTGTGGAGGAGACGGT GACCTCCAGCCCAGGGACTCCTGCCTCTCCCTGTTCTCTCAGGCATCATCATAGGAGTCACAGTTGCAGCCGT CTCAGGTGGTGGTGGGGACCCTGAGCGTGTGGACAGAAGCTCACAACGACCTGGGGCTGAGGACAATGTCCTCAA TGAGATCGTGAGTATCTTGCAGCCCACCCAGGTCCCTGAGCAGGAAATGGAAGTCCAGGAGCCAGCAGAGCCAAC AGGTGTCAACATGTTGTCCCCCGGGGAGTCAGAGCATCTGCTGGAACCGGCAGAAGCTGAAAGGTCTCAGAGGAG GAGGCTGCTGGTTCCAGCAAATGAAGGTGATCCCACTGAGACTCTGAGACAGTGCTTCGATGACTTTGCAGACTT GGTGCCCTTTGACTCCTGGGAGCCGCTCATGAGGAAGTTGGGCCTCATGGACAATGAGATAAAGGTGGCTAAAGC TGAGGCAGCGGGCCACAGGGACACCTTGTACACGATGCTGATAAAGTGGGTCAACAAAACCGGGCGAGATGCCTC GAGCTCTGGAAAGTTCATGTATCTAGAAGGTAATGCAGACTCTGCCATGTCCTAAGTGTGATTCTCTTCAGGAAG TGCACTTGGCATTATTTTTATAAGCTGAATGTGATAATAAGGACACTATGGAAATGTCTGGATCATTCCGTTTGT TTTATTTGGGCTACATTGTAAGATCCATCTACACAGTCGTTGTCCGACTTCACTTGATACTATATGATATGAACC TTTTTTGGGTGGGGGGGGGGGGGGTCACTCTGTCTCCCAGGCTGGAGTGCAATGGTGCAATCTTGGCTCACT ATAGCCTTGACCTCTCAGGCTCAAGCGATTCTCCCACCTCAGCCATCCAAATAGCTGGGACCACAGGTGTGCACC ACCACGCCCGGCTAATTTTTTGTATTTTGTCTAGATATAGGGGCTCTCTATGTTGCTCAGGGTGGTCTCGAATTC $\tt CTGGACTCAAGCAGTCTGCCCACCTCAGACTCCCAAAGCGGTGGAATTAGAGGCGTGAGCCCCCATGCTTGGCCT$ TACCTTTCTACTTTTATAATTCTGTATGTTATTATTTTATGAACATGAAGAAACTTTAGTAAATGTACTTGTTTA CATAGTTATGTGAATAGATTAGATAAACATAAAAGGAGGAGACATACAATGGGGGAAGAAGAAGAAGTCCCCTGT AAGATGTCACTGTCTGGGTTCCAGCCCTCCCTCAGATGTACTTTGGCTTCAATGATTGGCAACTTCTACAGGGGC CAGTCTTTTGAACTGGACAACCTTACAAGTATATGAGTATTATTATAGGTAGTTGTTTACATATGAGTCGGGAC $\verb|CCCCATCTATGGACAGGCTGGGACAGAGGCAGATGGGTTAGATCACACATAACAATAGGGTCTATGTCATATCCC| \\$ AAGTGAACTTGAGCCCTGTTTGGGCTCAGGAGATAGAAGACAAAATCTGTCTCCCACGTCTGCCATGGCATCAAG GGGGAAGAGTAGATGGTGCTTGAGAATGGTGTGAAATGGTTGCCATCTCAGGAGTAGATGGCCCGGCTCACTTCT GGTTATCTGTCACCCTGAGCCCATGAGCTGCCTTTTAGGGTACAGATTGCCTACTTGAGGACCTTGGCCGCTCTG TAAGCATCTGACTCATCTCAGAAATGTCAATTCTTAAACACTGTGGCAACAGGACCTAGAATGGCTGACGCATTA AGGTTTTCTTCTTGTGTCCTGTTCTATTATTGTTTTAAGACCTCAGTAACCATTTCAGCCTCTTTCCAGCAAACC ${\tt CTTCTCCATAGTATTTCAGTCATGGAAGGATCATTTATGCAGGTAGTCATTCCAGGAGTTTTTGGTCTTTTCTGT}$ ${\tt CAGACTGTTGTGTGTGTGGAGTTTTAGGAGTGGGGGGTGACCTTTCTGGTCTTTGCACTTCCATCCTCTCCCACT}$ ${\tt TCCATCTGGCATCCCACGCGTTGTCCCCTGCACTTCTGGAAGGCACAGGGTGCTGCCTCCTGGTCTTTGCCT}$ TTGCTGGGCCTTCTGTGCAGGACGCTCAGCCTCAGGGCTCAGAAGGTGCCAGTCCGGTCCCAGGTCCCTTGTCCC TTCCACAGAGGCCTTCCTAGAAGATGCATCTAGAGTGTCAGCCTTATCAGTGTTTAAGATTTTTCTTTTATTTTT AATTTTTTTGAGACAGAATCTCACTCTCTCGCCCAGGCTGGAGTGCAACGGTACGATCTTGGCTCAGTGCAACCT CTGGCTAATTTTTGTATTTTTAGTAGAGACGGGGTTTCACCATGTTGGTCAGGCTGGTCTCGAACTCCTGACCTC AAGTAAGCTTCCTGACGACATGAAATAATTGGGGGTTTTGTTGTTTAGTTACATTAGGCTTTGCTATATCCCCAG WO 2004/030615 PCT/US2003/028547

2709/6881 FIGURE 2490B

CGGACGCGTGGGCAGCAGCAGCCGGGCAGGGATGCTCCTGCGCTCCCGGGCGCCTCGGGCCCAGCCACCTGCT CGCCGGGGAAGAGACACGCAGAGGAGCAGCTGGCTTGCCCGGAGTCCTCCCACCTTGACCCAAGCATGCAGGGC CCACCCGCAGCCTCCGCCTGGGCTCAGCCTGGACGACTTCATCCCTGGCCACCTCCAGTCCCACATAGGGTCT TCCTCCCGGGGGACACGGGTGCCCGTGATCCGGAATGGTGGCTCCAACACCCTTAATTTCCAGTTCCACGACCCC GCGCCCAGGACTGTGTGCAATGGGGGCTACACACCAAGACGAGATGCTTCCCAGCACCCGGACCCTGCGTGGTAT CAGACCTGGCCAGGCCCTGGGAGCAAGCCCTCTGCAAGCACAAAGATCCCTGCCTCCCAGCACACCCAGAACTGG TCAGCCACGTGGACCAAGGACAGCGTCGGGACAAGCGCTGGGTCAAGTACGAGGGAATCGGGCCCGTGGAC GAGAGCGGCATGCCCATTGCCCCCGGATCCAGCGTTGACAGACCCAGAGACTGGTACCGGAGAATGTTCCAGCAG ATTCACCGGAAAATGCCAGACTTGCAGCTGGACCTCGAGGAGCCCACGCAGAGACCCCAGGCATCTAGGA GCCCAGCAAAGACCTGCCCACAGGCCCGGCCCGGCAACATCTTCCAGTGGAAGAAGCTGGGACCACTCTGAAGAG TTACCTAGAAGCACCTTCAACTACAGACCTGGAGCATTCTCCACTGTGCTGCAGCCCTCAAATCAGGTGCTCAGA CGCCGGGAAAAAGTAGACAATGTCTGGACGGAAGAGTCCTGGAACCAGTTTCTGCAGGAACTAGAGACTGGGCAG CTGGCCGAGCTGAGCGCCGAGCTGGACAAGGACCTGCGGGCAATTGAGACCCGACTGCCGTCCCCCAAGAGCTCG CCGGCCCCGACGGCCCCGGAGCAGCGCCCCGGCCGGCCTCAGCCTGGAGCTCCAGCTACCCACAT GCACCTTACCTGGGTTCCGCCCGGTCCCTGAGTCCCCACAAAATGGCTGATGGAGGAAGCCCCTTCCTAGGTCGG AGGGACTTTGTCTACCCTTCCTCAACCCGAGACCCTAGTGCCTCTAACGGAGGGGGCAGCCCAGCAGGAGGGAA GAGAAGAAGAGAAAGGCCGCCAGGCTCAAGTTTGACTTCCAGGCGCAGTCCCCCAAGGAGCTGACTCTGCAGAAG TTCCCTGCTAATTATGTGGAGGTGCTGCCCGCAGATGAGATCCCTAAGCCCATCAAGCCCCCGACCTACCAGGTG CTGGAGTATGGAGGGCTGTGGCCCAGTACACCTTCAAGGGGGACCTGGAGGTGGAGCTGTCCTTCCGCAAGGGA GAGCACATCTGCCTGATCCGCAAGGTGAACGAGAACTGGTACGAGGGACGCATCACGGGCACGGGCGCCCAAGGC ATATTCCCTGCCAGCTACGTGCAGGTGTCTCGTGAACCCCGGCTCTGTGACGACGGCCCCCAGCTCCCC ACGTCTCCCCGCCTGACCGCTGCCGCCCGCTCAGCCCGTCACCCCAGCTCCCCCTCAGCCCTGCGCAGCCCAGCT CAGACCCAGAATCTTGGCACCCCTGGTCCAGCTCTGTCCCACTCTCGAGGTCCCAGCCATCCCCTGGACCTGGGG ACCTCCTCTCAACACCTCTCAGATACACTGGACCCCGTACCGGGCGATGTACCAGTACAGGCCCCAGAACGAA GACGAGCTGGAGCTGCGCGAGGGGGACAGGGTGGATGTCATGCAGCAGTGTGACGATGGCTGGTTTGTGGGTGTC TCCCGGAGGACCCAGAAATTCGGAACGTTCCCTGGAAATTACGTTGCCCCGGTGTGAGTGGTCTCCATGGCAACT TGGAGCCAGCCAGGATGGGGTGGGAGCGGTGGCACTCGTGGGAGGAGGACCCCCGCCCACATCCTCCTCC CCAGGACCTGAGCTCCCAGCATCTGCAGACGACCCCCGCAGCATTTCCCTCGGACCCCCTCGAAGCCCCCTGGA CTGATTCCCACCCACGACTCACAGGCATTCCTCCCACAGCCCTTTCATTTCCTCCCCACCCCACTCCCCAAATAC AGAGGTCTGCTTTGAAGCGGAGACCATTTCCAGGCCTTATTGAGACCAGACCCCAAGTCCCCCACCCCATCCTG CTCCAGCGTTTCCTCTAACAGGGACCAGCTCTCCGCTTTGCCCCCACGGGGTTCCTCTAACCAGAACCAGCTTCC TTGCCTTCTGGCCTCCAGCTGGGTGTGGGGGGGGGGGGCCAAGCGGGGGACAGCACCTTCTTAGCGATC TAGGCCTGGCAAGAGCTCTGGCCCCAAGGCCTCCTCTCCCAGGGGCTGCCAAGTCCTGGCCCTGGCCCTGGCAT ATCACCCGCACTGTGGGGCCAGGCACCACTAGCCTGGCTCAAATATTCCCCAGGGAGACTGCTGTGTGCTGCCC GCCTGCCTGCTGGCTCTCCCCCAGCCCCACATCCCCTCTGGAAGAGAATGTAAAATAAACCTGGACACAAGGGCC TTCGTGGCCTCGA

MQGPPRSLRAGLSLDDFIPGHLQSHIGSSSRGTRVPVIRNGGSNTLNFQFHDPAPRTVCNGGYTPRRDASQHPDP
AWYQTWPGPGSKPSASTKIPASQHTQNWSATWTKDSKRRDKRWVKYEGIGPVDESGMPIAPRSSVDRPRDWYRRM
FQQIHRKMPDLQLDWTFEEPPRDPRHLGAQQRPAHRPGPATSSSGRSWDHSEELPRSTFNYRPGAFSTVLQPSNQ
VLRRREKVDNVWTEESWNQFLQELETGQRPKKPLVDDPGEKPSQPIEVLLERELAELSAELDKDLRAIETRLPSP
KSSPAPRRAPEQRPPAGPASAWSSSYPHAPYLGSARSLSPHKMADGGSPFLGRRDFVYPSSTRDPSASNGGGSPA
RREEKKRKAARLKFDFQAQSPKELTLQKGDIVYIHKEVDKNWLEGEHHGRLGIFPANYVEVLPADEIPKPIKPPT
YQVLEYGEAVAQYTFKGDLEVELSFRKGEHICLIRKVNENWYEGRITGTGRQGIFPASYVQVSREPRLRLCDDGP
QLPTSPRLTAAARSARHPSSPSALRSPADPTDLGGQTSPRRTGFSFPTQEPRPQTQNLGTPGPALSHSRGPSHPL
DLGTSSPNTSQIHWTPYRAMYQYRPQNEDELELREGDRVDVMQQCDDGWFVGVSRRTQKFGTFPGNYVAPV

FIGURE 2493

ACTTCCGCCCGGCGCGAGACCGAAGGCTGGCGGCTGGTCGCGTTGCAGGCAAC<u>ATG</u>TCGGAAGGAAACGCCGCC $\verb|CCTCCCCTCACCCCGGCCGCCTTCCCTCCATCCGTTCCAGGGACCTCACCCTCGGGGGAGTCAAGAAGAAAACCC||$ TTCACCCCAAATATCATCAGTCGGAAGATCAAGGAAGAGCCCAAGGAAGAAGTAACTGTCAAGAAGGAGAAGCGT GAAAGGGACAGAGACCGACAACGAGAGGGGCATGGACGAGGGCGAGGCCGTCCAGAAGTGATCCAGTCTCACTCC ATCTTTGAGCAGGGCCCAGCTGAAATGATGAAGAAAAAAAGGGAACTGGGATAAGACAGTGGATGTCAGACATG CTGGAGAAGGACGATTTCCTCGATGACCCCGGCCTGAGGAACGACACTCGAAATATGCCTGTGCAGCTGCCGCTG GAGGACATGGAGGTGGACATACCTGCTGTGAAAGTGAAAGAGGGCCACGAGATGAGGAGGAGAAGAGGCCAAGATG AAGGCTCCTCCCAAAGCAGCCAGGAAGACTCCAGGCCTCCCGAAGGATGTATCTGTGGCAGAGCTGCTGAGGGAG GACATCAAGCCTATCAAGACAGAGGTGCAGGGCGAGGACGGCGGTGGTGCTCATCAAGCAGAGAAAGACCGA GAAGCCAAATTGGCAGAGAATGCTTGTACCCTGGCTGACCTGACAGAGGGTCAGGTTGGCAAGCTACTCATCCGC ${\tt CAGGAGCTGGTGTCCGTGGGCCTTGGAGACAGTAGGACAGGGGAGATGACAGTCCTGGGACACGTGAAGCACAAA}$ CTTGTATGTTCCCCTGATTTTGAATCCCTCTTGGATCACAAACACCGGTAAAATGAGCAGGTGGAGGAGGACGGC CCCACTCACTCCAGCCTTTGGCAACCATTGTTCCAGGTCCCCCAGGGCTTCCTCCCACAGCAGCTGTGAATGGCA TATGTCTTAATCTCTTCCACTGATGCATCCTCCAAGGGTAGATGGGGAGGGTCTGTGTGAAGGGGCCGGCTTCTC TTGGTGCCTGCTGGGTTGCAGGGGCAGGAAGCGTGTGGACTGCAGCTTCTGCTGGTGCTCCCCCCGTCCTCCTGG AGGCAGTATAGGAGAGAGAGCAAGGATTGAGTCTGAGACTTAAGCACTCGGTCCCAGCTTGCCAGTTCCTGGTTC TGTGTCCTTGGACAAACTACCTTACCTTTCTGAGCCTCCTATACCTCATCCGACACAAATGGGGATGATACCTAC CTCCAGGGTTGGCGTGAGGATTCATGGGCTATTATAGATGAAAACTGCACAAGGCCAGAACCAGCAGGCACTCAA TAAACGTTCATGTCCTTTTTCTCT

MSEGNAAGEPSTPGGPRPLLTGARGLIGRRPAPPLTPGRLPSIRSRDLTLGGVKKKTFTPNIISRKIKEEPKEEV TVKKEKRERDRDRQREGHGRGRGPEVIQSHSIFEQGPAEMMKKKGNWDKTVDVSDMGPSHIINIKKEKRETDEE TKQILRMLEKDDFLDDPGLRNDTRNMPVQLPLAHSGWLFKEENDEPDVKPWLAGPKEEDMEVDIPAVKVKEEPRD EEEEAKMKAPPKAARKTPGLPKDVSVAELLRELSLTKEEELLFLQLPDTLPGQPPTQDIKPIKTEVQGEDGQVVLIKQEKDREAKLAENACTLADLTEGQVGKLLIRKSGRVQLLLGKVTLDVTMGTACSFLQELVSVGLGDSRTGEMTVLGHVKHKLVCSPDFESLLDHKHR

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2714/6881 FIGURE 2495

TCCCGCGTCCCGGCCGCCGCTGGACTTGGCCGACTACACCTATGACCTGGCGGAGGAGGACGACTCGGAGCCCC TCAACTACAAAGACCCCTGCAAGGCGGCTGCCTTTCTTGGGGACATTGCCCTGGACGAAGAGGACCTGAGGGCCT TCCAGGTACAGCAGGCTGTGGATCTCAGACGGCACACAGCTCGTAAGTCCTCCATCAAAGCTGCAGTTCCAGGAA ACACTTCTACCCCCAGCTGCCAGAGCACCAACGGGCAGCCTCAGAGGGGGAGCCTGTGGGAGATGGAGAGGTAGAT CCCGTAGCCGGCGGCGGCGACGTCCCGACCAGAGCGTGTGTGGCCCGATGGGGTCATCCCCTTTGTCATTGGGG GAAACTTCACTGGTAGCCAGAGGGCAGTCTTCCGGCAGGCCATGAGGCACTGGGAGAAGCACCTGTGTCACCT TCCTGGAGCGCACTGACGAGGACAGCTATATTGTGTTCACCTATCGACCTTGCGGGTGCTGCTCCTACGTGGGTC GCCGCGGGGGGCCCCCAGGCCATCTCCATCGGCAAGAACTGTGACAAGTTCGGCATTGTGGTCCACGAGCTGG TCCAGCCAGGGCAGGAGTATAACTTCCTGAAGATGGAGCCTCAGGAGGTGGAGTCCCTGGGGGAGACCTATGACT TCGACAGCATCATGCATTACGCTCGGAACACATTCTCCAGGGGCATCTTCCTGGATACCATTGTCCCCAAGTATG AGGTGAACGGGGTGAAACCTCCCATTGGCCAAAGGACACGGCTCAGCAAGGGGGGACATTGCCCAAGCCCGCAAGC TTTACAAGTGCCCAGCCTGTGGAGAGACCCTGCAAGACAGCACAGGCAACTTCTCCTCCCCTGAATACCCCAATG GCTACTCTGCTCACATGCACTGCGTGTGGCGCATCTCTGTCACACCCGGGGAAGATCATCCTGAACTTCACGT CCCTGGACCTGTACCGCAGCCGCCTGTGCTGGTACGACTATGTGGAGGTCCGAGATGGCTTCTGGAGGAAGGCGC CCCTCCGAGGCCGCTTCTGCGGGTCCAAACTCCCTGAGCCTATCGTCTCCACTGACAGCCGCCTCTGGGTTGAAT ${\tt TCCGCAGCAGCAATTGGGTTGGAAAGGGCTTCTTTGCAGTCTACGAAGCCATCTGCGGGGGTGATGTGAAAA}$ AGGACTATGGCCACATTCAATCGCCCAACTACCCAGACGATTACCGGCCCAGCAAAGTCTGCATCTGGCGGATCC AGGTGTCTGAGGGCTTCCACGTGGGCCTCACATTCCAGTCCTTTGAGATTGAGCGCCCACGACAGCTGTGCCTACG ACTATCTGGAGGTGCGCGACGGGCACAGTGAGAGCAGCACCCTCATCGGGCGCTACTGTGGCTATGAGAAGCCTG ATGACATCAAGAGCACGTCCAGCCGCCTCTGGCTCAAGTTCGTCTCTGACGGGTCCATTAACAAAGCGGGCTTTG CCGTCAACTTTTTCAAAGAGGTGGACGAGTGCTCTCGGCCCAACCGCGGGGGCTGTGAGCAGCGGTGCCTCAACA CCCTGGGCAGCTACAAGTGCAGCTGTGACCCCGGGTACGAGCTGGCCCCAGACAAGCGCCGCTGTGAGGCTGCTT GTGGCGGATTCCTCACCAAGCTCAACGGCTCCATCACCAGCCCGGGCTGGCCCAAGGAGTACCCCCCCAACAAGA ACTGCATCTGGCAGCTGGTGGCCCCCACCCAGTACCGCATCTCCCTGCAGTTTGACTTCTTTGAGACAGAGGGCA ATGATGTGTGCAAGTACGACTTCGTGGAGGTGCGCAGTGGACTCACAGCTGACTCCAAGCTGCCATGGCAAGTTCT GTGGTTCTGAGAAGCCCGAGGTCATCACCTCCCAGTACAACAACATGCGCGTGGAGTTCAAGTCCGACAACACCG TGTCCAAAAAGGGCTTCAAGGCCCACTTCTCCAGAAAAGAGGCCAGCTCTGCAGCCCCCTCGGGGACGCCCCC ACCAGCTCAAATTCCGAGTGCAGAAAAGAAACCGGACCCCCAGTGAGGCCTGCCAGGCCTCCCGGACCCCTTGT TACTCAGGAACCTCACCTTGGACGGAATGGGATGGGGGCTTCGGTGCCCACCAACCCCCCACCTCCACTCTGCCA TTCCGGCCCACCTCCCTCTGGCCGGACAGAACTGGTGCTCTCTTCTCCCCACTGTGCCCGTCCGCGGACCGGGGA CCCTTCCCGTGCCCTACCCCTCCCATTTTGATGGTGTCTGTGACATTTCCTGTTGTGAAGTAAAAGAGGGACC CCTGCGTCCTGC

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2715/6881 FIGURE 2496

MPGVARLPLLLGLLLIPRPGRPLDLADYTYDLAEEDDSEPLNYKDPCKAAAFLGDIALDEEDLRAFQVQQAVDLR
RHTARKSSIKAAVPGNTSTPSCQSTNGQPQRGACGRWRGRSRSRRAATSRPERVWPDGVIPFVIGGNETGSQRAV
FRQAMRHWEKHTCVTFLERTDEDSYIVFTYRPCGCCSYVGRRGGGPQAISIGKNCDKFGIVVHELGHVVGFWHEH
TRPDRDRHVSIVRENIQPGQEYNFLKMEPQEVESLGETYDFDSIMHYARNTFSRGIFLDTIVPKYEVNGVKPPIG
QRTRLSKGDIAQARKLYKCPACGETLQDSTGNFSSPEYPNGYSAHMHCVWRISVTPGEKIILNFTSLDLYRSRLC
WYDYVEVRDGFWRKAPLRGRFCGSKLPEPIVSTDSRLWVEFRSSSNWVGKGFFAVYEAICGGDVKKDYGHIQSPN
YPDDYRPSKVCIWRIQVSEGFHVGLTFQSFEIERHDSCAYDYLEVRDGHSESSTLIGRYCGYEKPDDIKSTSSRL
WLKFVSDGSINKAGFAVNFFKEVDECSRPNRGGCEQRCLNTLGSYKCSCDPGYELAPDKRRCEAACGGFLTKLNG
SITSPGWPKEYPPNKNCIWQLVAPTQYRISLQFDFFETEGNDVCKYDFVEVRSGLTADSKLHGKFCGSEKPEVIT
SQYNNMRVEFKSDNTVSKKGFKAHFFSEKRPALQPPRGRPHQLKFRVQKRNRTPQ

TCCCGCGTCCCGGCCGGCCGGACTTGGCCGACTACACCTATGACCTGGCGGAGGACGACGACTCGGAGCCCC TCAACTACAAAGACCCCTGCAAGGCGGCTGCCTTTCTTGGGGACATTGCCCTGGACGAAGAGACCTGAGGGCCT TCCAGGTACAGCAGGCTGTGGATCTCAGACGGCACACAGCTCGTAAGTCCTCCATCAAAGCTGCAGTTCCAGGAA ACACTTCTACCCCCAGCTGCCAGAGCACCAACGGGCAGCCTCAGAGGGGAGCCTGTGGGAGATGGAGAGGTAGAT CCCGTAGCCGGCGGCGGCGACGTCCCGACCAGAGCGTGTGTGGCCCGATGGGGTCATCCCCTTTGTCATTGGGG GAAACTTCACTGGTAGCCAGAGGGCAGTCTTCCGGCAGGCCATGAGGCACTGGGAGAAGCACACCTGTGTCACCT TCCTGGAGCGCACTGACGACGACAGCTATATTGTGTTCACCTATCGACCTTGCGGGTGCTGCTCCTACGTGGGTC TCCAGCCAGGGCAGGAGTATAACTTCCTGAAGATGGAGCCTCAGGAGGTGGAGTCCCTGGGGGAGACCTATGACT TCGACAGCATCATGCATTACGCTCGGAACACATTCTCCAGGGGCATCTTCCTGGATACCATTGTCCCCAAGTATG AGGTGAACGGGGTGAAACCTCCCATTGGCCAAAGGACACGGCTCAGCAAGGGGGGACATTGCCCAAGCCCGCAAGC TTTACAAGTGCCCAGCCTGTGGAGAGACCCTGCAAGACAGCACAGGCAACTTCTCCTCCCCTGAATACCCCAATG ${\tt GCTACTCTGCTCACATGCACTGCGTGTGGCGCATCTCTGTCACACCCGGGGAGAAGATCATCCTGAACTTCACGT}$ CCCTGGACCTGTACCGCAGCCGCCTGTGCTGGTACGACTATGTGGAGGTCCGAGATGGCTTCTGGAGGAAGGCGC $\tt CCCTCCGAGGCCGCTTCTGCGGGTCCAAACTCCCTGAGCCTATCGTCTCCACTGACAGCCGCCTCTGGGTTGAAT$ TCCGCAGCAGCAGCAATTGGGTTGGAAAGGGCTTCTTTGCAGTCTACGAAGCCATCTGCGGGGGTGATGTGAAAA AGGACTATGGCCACATTCAATCGCCCAACTACCCAGACGATTACCGGCCCAGCAAAGTCTGCATCTGGCGGATCC AGGTGTCTGAGGGCTTCCACGTGGGCCTCACATTCCAGTCCTTTGAGATTGAGCGCCACGACAGCTGTGCCTACG ACTATCTGGAGGTGCGCGACGGGCACAGTGAGAGCAGCACCCTCATCGGGCGCTACTGTGGCTATGAGAAGCCTG ATGACATCAAGAGCACGTCCAGCCGCCTCTGGCTCAAGTTCGTCTCTGACGGGTCCATTAACAAAGCGGGCTTTG $\verb|CCGTCAACTTTTCAAAGAGGTGGACGAGTGCTCTCGGCCCAACCGCGGGGGCTGTGAGCAGCGGTGCCTCAACA| \\$ CCCTGGGCAGCTACAAGTGCAGCTGTGACCCCGGGTACGAGCTGGCCCCAGACAAGCGCCGCTGTGAGGCTGCTT GTGGCGGATTCCTCACCAAGCTCAACGGCTCCATCACCAGCCCGGGCTGGCCCAAGGAGTACCCCCCAACAACAAGA ACTGCATCTGGCAGCTGGTGGCCCCCACCCAGTACCGCATCTCCCTGCAGTTTGACTTCTTTGAGACAGAGGGCA ATGATGTGTGCAAGTACGACTTCGTGGAGGTGCGCAGTGGACTCACAGCTGACTCCAAGCTGCATGGCAAGTTCT GTGGTTCTGAGAAGCCCGAGGTCATCACCTCCCAGTACAACATGCGCGTGGAGTTCAAGTCCGACAACACCG CACACGCCCACACGCACACATGTGCACACACTTGCCCCATCGCACAAGAAACCTGCAGAGGACCCCCACTGG $\tt GGGCATCGAGGCTCAGGGCCCGGGGCATCTGACTCTGGCCCCCCAGGAGGGGGAGCTATTTGGACTTTT$ GGGACACCCACCGAGGAGACCCTAAGCCAAGAAGGAGAAAAGAGCCTGAAGACCTTCAGTCTGACCCCTGCCA CCTTCCGGGGCATTTGGGCACTGTAGGAAAAGAGGCCAGCTCTGCAGCCCCCTCGGGGACGCCCCCACCAGCTCA AATTCCGAGTGCAGAAAAGAAACCGGACCCCCAGTGAGGCCTGCCAGGCCTCCCGGACCCCTTGTTACTCAGGA ACCTCACCTTGGACGGAATGGGATGGGGGCTTCGGTGCCCACCAACCCCCCACCTCCACTCTGCCATTCCGGCCC ACCTCCCTCTGGCCGGACAGAACTGGTGCTCTTCTCCCCACTGTGCCCGTCCGCGGACCGGGGACCCTTCCCC GTGCCCTACCCCTCCCATTTTGATGGTGTCTGTGACATTTCCTGTTGTGAAGTAAAAGAGGGACCCCTGCGTCC TGC

MPGVARLPLLLGLLLLPRPGRPLDLADYTYDLAEEDDSEPLNYKDPCKAAAFLGDIALDEEDLRAFQVQQAVDLR
RHTARKSSIKAAVPGNTSTPSCQSTNGQPQRGACGRWRGRSRSRRAATSRPERVWPDGVIPFVIGGNFTGSQRAV
FRQAMRHWEKHTCVTFLERTDEDSYIVFTYRPCGCCSYVGRRGGGPQAISIGKNCDKFGIVVHELGHVVGFWHEH
TRPDRDRHVSIVRENIQPGQEYNFLKMEPQEVESLGETYDFDSIMHYARNTFSRGIFLDTIVPKYEVNGVKPPIG
QRTRLSKGDIAQARKLYKCPACGETLQDSTGNFSSPEYPNGYSAHMHCVWRISVTPGEKIILNFTSLDLYRSRLC
WYDYVEVRDGFWRKAPLRGRFCGSKLPEPIVSTDSRLWVEFRSSSNWVGKGFFAVYEAICGGDVKKDYGHIQSPN
YPDDYRPSKVCIWRIQVSEGFHVGLTFQSFEIERHDSCAYDYLEVRDGHSESSTLIGRYCGYEKPDDIKSTSSRL
WLKFVSDGSINKAGFAVNFFKEVDECSRPNRGGCEQRCLNTLGSYKCSCDPGYELAPDKRRCEAACGGFLTKLNG
SITSPGWPKEYPPNKNCIWQLVAPTQYRISLQFDFFETEGNDVCKYDFVEVRSGLTADSKLHGKFCGSEKPEVIT
SQYNNMRVEFKSDNTVSKKGFKAHFFSVLEGAGDRHSHLSGLELLLCPHALVDTVPAPPSALHGDTHAHTHTHVH
THCPIAQETCRGPPLGASRLSPQGPGHLTLAPQEGSYLDFWDTHRGDPKPRRRKSLKTFSLTPATFRGIWAL

GACTTGGCCGACTACACCTATGACCTGGCGGAGGAGGACGACTCGGAGCCCCTCAACTACAAAGACCCCTGCAAG GCGGCTGCCTTTCTTGGGGACATTGCCCTGGACGAAGAGGACCTGAGGGCCTTCCAGGTACAGCAGGCTGTGGAT CTCAGACGGCACACAGCTCGTAAGTCCTCCATCAAAGCTGCAGTTCCAGGAAACACTTCTACCCCCAGCTGCCAG AGCACCAACGGGCAGCCTCAGAGGGGAGCCTGTGGGAGATGGAGAGGTAGATCCCGTAGCCGGCGGCGGCGACG TCCCGACCAGAGCGTGTGTGGCCCGATGGGGTCATCCCCTTTGTCATTGGGGGGAAACTTCACTGGTAGCCAGAGG GCAGTCTTCCGGCAGGCCATGAGGCACTGGGAGAAGCACCTGTGTCACCTTCCTGGAGCGCACTGACGAGGAC AGCTATATTGTGTTCACCTATCGACCTTGCGGGTGCTCCTACGTGGGTCGCCGCGGGGGGGCCCCCAGGCC ATCTCCATCGGCAAGAACTGTGACAAGTTCGGCATTGTGGTCCACGAGCTGGGCCACGTCGTCGGCTTCTGGCAC TTCCTGAAGATGGAGCCTCAGGAGGTGGAGTCCCTGGGGGAGACCTATGACTTCGACAGCATCATGCATTACGCT CGGAACACATTCTCCAGGGGCATCTTCCTGGATACCATTGTCCCCAAGTATGAGGTGAACGGGGTGAAACCTCCC ATTGGCCAAAGGACACGGCTCAGCAAGGGGGACATTGCCCAAGCCCGCAAGCTTTACAAGTGCCCAGCCTGTGGA GAGACCCTGCAAGACAGCACAGGCAACTTCTCCTCCCCTGAATACCCCAATGGCTACTCTGCTCACATGCACTGC GTGTGGCGCATCTCTGTCACACCCGGGGAGAAGATCATCCTGAACTTCACGTCCCTGGACCTGTACCGCAGCCGC TCCAAACTCCCTGAGCCTATCGTCTCCACTGACAGCCGCCTCTGGGTTGAATTCCGCAGCAGCAGCAATTGGGTT GGAAAGGGCTTCTTTGCAGTCTACGAAGCCATCTGCGGGGGTGATGTGAAAAAGGACTATGGCCACATTCAATCG CCCAACTACCCAGACGATTACCGGCCCAGCAAAGTCTGCATCTGGCGGATCCAGGTGTCTGAGGGCTTCCACGTG GGCCTCACATTCCAGTCCTTTGAGATTGAGCGCCACGACAGCTGTGCCTACGACTATCTGGAGGTGCGCGACGGG CACAGTGAGAGCACCCTCATCGGGCGCTACTGTGGCTATGAGAAGCCTGATGACATCAAGAGCACGTCCAGC CGCCTCTGGCTCAAGTTCGTCTCTGACGGGTCCATTAACAAAGCGGGCTTTGCCGTCAACTTTTTCAAAGAGGTG GACGAGTGCTCTCGGCCCAACCGCGGGGGCTGTGAGCAGCGGTGCCTCAACACCCTGGGCAGCTACAAGTGCAGC TGTGACCCCGGGTACGACCTGGCCCCAGACAAGCGCCGCTGTGAGGGGTGTTATGATCTACAGGTTGGGAAACCC CTGTTGTGGGACAGACACTGTTTCCGCCTCTCCACGCATGGTCCCGAGATGCTGGGGACAGCACTCCGAGGCTAA

MPGVARLPLLLGLLLLPRPGRPLDLADYTYDLAEEDDSEPLNYKDPCKAAAFLGDIALDEEDLRAFQVQQAVDLR RHTARKSSIKAAVPGNTSTPSCQSTNGQPQRGACGRWRGRSRSRRAATSRPERVWPDGVIPFVIGGNFTGSQRAV FRQAMRHWEKHTCVTFLERTDEDSYIVFTYRPCGCCSYVGRRGGGPQAISIGKNCDKFGIVVHELGHVVGFWHEH TRPDRDRHVSIVRENIQPGQEYNFLKMEPQEVESLGETYDFDSIMHYARNTFSRGIFLDTIVPKYEVNGVKPPIG QRTRLSKGDIAQARKLYKCPACGETLQDSTGNFSSPEYPNGYSAHMHCVWRISVTPGEKIILNFTSLDLYRSRLC WYDYVEVRDGFWRKAPLRGRFCGSKLPEPIVSTDSRLWVEFRSSSNWVGKGFFAVYEAICGGDVKKDYGHIQSPN YPDDYRPSKVCIWRIQVSEGFHVGLTFQSFEIERHDSCAYDYLEVRDGHSESSTLIGRYCGYEKPDDIKSTSSRL WLKFVSDGSINKAGFAVNFFKEVDECSRPNRGGCEQRCLNTLGSYKCSCDPGYELAPDKRRCEGCYDLQVGKPLL WDRHCFRLSTHGPEMLGTALRG

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2720/6881 FIGURE 2501

GACTTGGCCGACTACACCTATGACCTGGCGGAGGAGGACGACTCGGAGCCCCTCAACTACAAAGACCCCTGCAAG GCGGCTGCCTTTCTTGGGGACATTGCCCTGGACGAAGAGGACCTGAGGGCCTTCCAGGTACAGCAGGCTGTGGAT CTCAGACGGCACACAGCTCGTAAGTCCTCCATCAAAGCTGCAGTTCCAGGAAACACTTCTACCCCCAGCTGCCAG AGCACCAACGGCAGCCTCAGAGGGGAGCCTGTGGGAGATGGAGAGGTAGATCCCGTAGCCGGCGGCGGCGACG TCCCGACCAGAGCGTGTGTGGCCCGATGGGGTCATCCCCTTTGTCATTGGGGGAAACTTCACTGGTAGCCAGAGG GCAGTCTTCCGGCAGGCCATGAGGCACTGGGAGAAGCACCTGTGTCACCTTCCTGGAGCGCACTGACGAGGAC AGCTATATTGTGTTCACCTATCGACCTTGCGGGTGCTGCTCCTACGTGGGTCGCCGCGGGGGGCCCCCAGGCC ATCTCCATCGGCAAGAACTGTGACAAGTTCGGCATTGTGGTCCACGAGCTGGGCCACGTCGTCGGCTCTGGCAC TCACTGCTCCTTCTCAGCTGTGGCTCTAGAAATGGTGCTTCCCTTCCCATGTTCCCTTGAGTCCTCCACTCACCAG GCCCTCTGCTGGACAGGACTCTTCCTCAGACCCTCCCCATTCCCCAGGCTCCCCTTGGCTGCTCCCCGGACCCTC AGGGCAGGAGTATAACTTCCTGAAGATGGAGCCTCAGGAGGTGGAGTCCCTGGGGGAGACCTATGACTTCGACAG CGGGGTGAAACCTCCCATTGGCCAAAGGACACGGCTCAGCAAGGGGGGACATTGCCCAAGCCCGCAAGCTTTACAA GTGCCCAGCCTGTGGAGAGACCCTGCAAGACAGCACAGGCAACTTCTCCTCCCCTGAATACCCCAATGGCTACTC TGCTCACATGCACTGCGTGTGGCGCATCTCTGTCACACCCGGGGAGAAGATCATCCTGAACTTCACGTCCCTGGA $\verb|CCTGTACCGCAGCCGCCTGTGCTGGTACGACTATGTGGAGGTCCGAGATGGCTTCTGGAGGAAGGCGCCCCTCCG|$ AGGGCCCAACACTGGCCAGGGATGACAACCTGGTATGGGAGCCAGGAGTCCTGGCATCATTAGTCCCAGATAGCT GCATTACTCACTTGCTGCGAGACTTCAGGCCGCTTCTGCGGGTCCAAACTCCCTGAGCCTATCGTCTCCACTGAC AGCCGCCTCTGGGTTGAATTCCGCAGCAGCAGCAATTGGGTTGGAAAGGGCTTCTTTGCAGTCTACGAAGCCATC TGCGGGGGTGATGTGAAAAAGGACTATGGCCACATTCAATCGCCCAACTACCCAGACGATTACCGGCCCAGCAAA GTCTGCATCTGGCGGATCCAGGTGTCTGAGGGCTTCCACGTGGGCCTCACATTCCAGTCCTTTGAGATTGAGCGC CACGACAGCTGTGCCTACGACTATCTGGAGGTGCGCGACGGGCACAGTGAGAGCAGCACCCTCATCGGGCGCTAC TGTGGCTATGAGAAGCCTGATGACATCAAGAGCACGTCCAGCCGCCTCTGGCTCAAGTTCGTCTCTGACGGGTCC ATTAACAAAGCGGGCTTTGCCGTCAACTTTTTCAAAGAGGTGGACGAGTGCTCTCGGCCCAACCGCGGGGGCTGT GAGCAGCGGTGCCTCAACACCCTGGGCAGCTACAAGTGCAGCTGTGACCCCGGGTACGAGCTGGCCCCAGACAAG AAGCTGCATGGCAAGTTCTGTGGTTCTGAGAAGCCCGAGGTCATCACCTCCCAGTACAACAACATGCGCGTGGAG TTCAAGTCCGACAACACCGTGTCCAAAAAGGGCTTCAAGGCCCACTTCTTCTCAGAAAAGAGGCCAGCTCTGCAG CCCCTCGGGGACGCCCCACCAGCTCAAATTCCGAGTGCAGAAAAGAAACCGGACCCCCAG

MPGVARLPLLLGLLLPRPGRPLDLADYTYDLAEEDDSEPLNYKDPCKAAAFLGDIALDEEDLRAFQVQQAVDLR RHTARKSSIKAAVPGNTSTPSCQSTNGQPQRGACGRWRGRSRSRRAATSRPERVWPDGVIPFVIGGNFTGSQRAV FRQAMRHWEKHTCVTFLERTDEDSYIVFTYRPCGCCSYVGRRGGGPQAISIGKNCDKFGIVVHELGHVVGFWHEH TRPDRDRHVSIVRENIQPGVLHSSLLLLSCGSRNGASFPCSLESSTHQALCWTGLFLRPSPFPRLPLAAPRTLRA GV

GCAAGCCGGAGCCCTGGGGTTGGGCAGCACTCGGTTCCGTGCAACTTTCAAGTGAGTTGCGAACTCCGCCCTGTA GGCCGGTGCTGGTGGCCCGGCGCGTGGAACCGCGCGCGCTCCAGCGGGGACCAGCAGCAGGAGGGCCGAGC GCCAGGTTCTCCGCGGCAGAAAGGGCGGTGGGAGCTGTAACTGCCCCGGCCGCGGGGCGCCCCCCTCCCAAGT CGGCTTCCTCCCGGGGGCCGCTTTGCCTCGGGTCTCCCCATTCTCCAGGTCCCCTGAACTGCACAGTCGGAG GCCGTGGCCGGGGCTCTGCCTCCGCCGAGGGACAGCCGGATCGCCCTCTGCTTCCCGCAACTGCCCTGATCA $\tt CCCCCGTCCCAGCCCTTGAGTGAACGTCCTTCTGAGCGGCTTCCTGGGGTCCTCCCACGTCCCAAAGGCCGGC$ $\texttt{AAG} \underline{\textbf{ATG}} \texttt{GTGTCCTGGATGATCTGTCGCCTGGTGGTGCTGTGTTTTGGGATGCTGTCCCAGCTTATGCTTCCTAT}$ AAGGCTGTGAAGACCAAGAACATTCGTGAATATGTGCGGTGGATGATGTACTGGATTGTTTTTTGCACTCTTCATG GCAGCAGAGATCGTTACAGACATTTTTATCTCCTGGTTCCCTTTCTACTATGAGATCAAGATGGCCTTCGTGCTG TGGCTGCTCTCACCCTACACCAAGGGCCCCAGCCTGCTTTACCGCAAGTTTGTCCACCCGTCCCTGTCCCGCCAT GAGAAGGAGATCGACGCGTACATCGTGCAGGCCAAGGAGCGCAGCTACGAGACCGTGCTCAGCTTCGGGAAGCGG GGCCTCAACATTGCCGCCTCCGCTGCTGCAGGCTGCCACCAAGAGTCAGGGGGCGCTGGCCGGCAGGCTGCGG AGCTTCTCCATGCAGGACCTGCGCTCCATCTCTGACGCACCTGCCCTACCATGACCCCCTCTACCTGGAG GACCAGGTGTCCCACCGGAGGCCACCCATTGGGTACCGGGCCGGGGCCCTGCAGGACAGCGACACCGAGGATGAG TGTTGGTCAGATACTGAGGCAGTCCCCGGGCGCCCAGCCCGAGAGAAGCCCCTAATCCGCAGCCAGAGC CTGCGTGTGGTCAAGAGGAAGCCACCGGTGCGGGAGGGCACCTCGCGCTCCCTGAAGGTTCGGACGAGAAAAAG ACTGTGCCCTCAGACGTGGACAGCTAGGGTCTGCTGCATCTGCCCCCTTCTTACCTCGTGCCCTGCAGGGCTCCA CTGCTGATGGTTAAGGGCCGGGAGCAGATGCTGCCAAGGCCACATGCAGGGATGCACCCACAATGTACCAAAGCA AAAAA

MVSWMICRLVVLVFGMLCPAYASYKAVKTKNIREYVRWMMYWIVFALFMAAEIVTDIFISWFPFYYEIKMAFVLW LLSPYTKGASLLYRKFVHPSLSRHEKEIDAYIVQAKERSYETVLSFGKRGLNIAASAAVQAATKSQGALAGRLRS FSMQDLRSISDAPAPAYHDPLYLEDQVSHRRPPIGYRAGGLQDSDTEDECWSDTEAVPRAPARPREKPLIRSQSL RVVKRKPPVREGTSRSLKVRTRKKTVPSDVDS

GACTGCAATGTGCCGATCTTAGCTGCCTGAGAGGATGTCTGGGGTGTCCGAGCCCCTGAGTCGAGTAAAGTT GGGCACGTTACGCCGGCCTGAAGGCCCTGCAGAGCCCATGGTGGTGGTACCAGTAGATGTGGAAAAAGGAGGACGT GCGTATCCTCAAGGTCTGCTTCTATAGCAACAGCTTCAATCCTGGGAAAAACTTCAAACTGGTCAAATGCACTGT GGTGCAGGACAAGTATGAGTGTCTGCACGTGGAAGCCGAGTGGAGGTATGACCTTCAAATCCGCTACTTGCCAGA AGACTTCATGGAGAGCCTGAAGGAGGACAGGACCACGCTGCTCTATTTTTACCAACAGCTCCGGAACGACTACAT GCAGCGCTACGCCAGCAAGGTCAGCGAGGGCATGCCCTGCAGCTGGGCTGCCTGGAGCTCAGGCGGTTCTTCAA GGATATGCCCCACAATGCACTTGACAAGAAGTCCAACTTCGAGCTCCTAGAAAAGGAAGTGGGGCTGGACTTGTT TTTCCCAAAGCAGATGCAGGAGAACTTAAAGCCCAAACAGTTCCGGAAGATGATCCAGCAGACCTTCCAGCAGTA CGCCTCGCTCAGGGAGGAGGAGTGCGTCATGAAGTTCTTCAACACTCTCGCCGGCTTCGCCAACATCGACCAGGA GACCTACCGCTGTGAACTCATTCAAGGATGGAACATTACTGTGGACCTGGTCATTGGCCCTAAAGGGATCCGCCA GCTGACTAGTCAGGACGCAAAGCCCACCTGCCTGGCCGAGTTCAAGCAGATCAGGTCCATCAGGTGCCTCCCGCT GGAGGAGGCCAGGCAGTACTTCAGCTGGGCATTGAAGGTGCCCCCCAGGCCTTGTCCATCAAAAACCTCATCCCT AGCAGAGGCTGAGAACATGGCTGACCTCATAGACGGCTACTGCCGGCTGCAGGGTGAGCACCAAGGCTCTCTCAT CATCCATCCTAGGAAAGATGGTGAGAAGCGGAACAGCCTGCCCCAGATCCCCATGCTAAACCTGGAGGCCCGGCG GTCCCACCTCTCAGAGAGCTGCAGCATAGAGTCAGACATCTACGCAGAGATTCCCGACGACAAACCCTGCGAAGGCC CGGAGGTCCACAGTATGCCATTGCCCGTGAAGATGTGGTCCTGAATCGTATTCTTGGGGAAGGCTTTTTTTGGGGA CACTCTGGACAACAAGGAGAAGTTCATGAGCGAGGCAGTGATCATGAAGAACCTCGACCCCGCACATCGTGAA GCTGATCGGCATCATTGAAGAGGAGCCCACCTGGATCATCATGGAATTGTATCCCTATGGGGAGCTGGGCCACTA CCTGGAGCGGAACAAGAACTCCCTGAAGGTGCTCACCCTCGTGCTGTACTCACTGCAGATATGCAAAGCCATGGC $\tt CTACCTGGAGAGCATCAACTGCGTGCACAGGGACATTGCTGTCCGGAACATCCTGGTGGCCTCCCTGAGTGTGT$ GAAGCTGGGGGACTTTGGTCTTTCCCGGTACATTGAGGACGAGGACTATTACAAAGCCTCTGTGACTCGTCTCCC CATCAAATGGATGTCCCCAGAGTCCATTAACTTCCGACGCTTCACGACAGCCAGTGACGTCTGGATGTTCGCCGT GGAGAAAGGAGACCGGCTGCCCAAGCCTGATCTCTGTCCACCGGTCCTTTATACCCTCATGACCCGCTGCTGGGA CTACGACCCCAGTGACCGGCCCCGCTTCACCGAGCTGGTGTGCAGCCTCAGTGACGTTTATCAGATGGAGAAGGA CATTGCCATGGAGCAAGAGGAATGCTCGCTACCGAACCCCCAAAATCTTGGAGCCCACAGCCTTCCAGGAACC GGTTCCTGAGGGTCTGTGTGCCAGCTCTCCTACGCTCACCAGCCCTATGGAGTATCCATCTCCCGTTAACTCACT GCACACCCCACCTCTCCACCGGCACAATGTCTTCAAACGCCACAGCATGCGGGAGGAGGACTTCATCCAACCCAG CAGCCGAGAAGAGGCCCAGCAGCTGTGGGAGGCTGAAAAGGTCAAAATGCGGCAAATCCTGGACAAACAGCAGAA GTCCCCATTGACGCCAGAGAAGGAGGTCGGCTACCTGGAGTTCACAGGGCCCCCACAGAAGCCCCCGAGGCTGGG CGCACAGTCCATCCAGCCCACAGCTAACCTGGACCGGACTGATGACCTGGTGTACCTCAATGTCATGGAGCTGGT GCGGGCCGTGCTGGAGCTCAAGAATGAGCTCTGTCAGCTGCCCCCCGAGGGCTACGTGGTGGTGGTGAAGAATGT GATCGAGGGCACCCAGAAACTGCTCAACAAAGACCTGGCAGAGCTCATCAACAAGATGCGGCTGGCACAGCAGAA CGCCGTGACCTCCCTAAGTGAGGAGTGCAAGAGGCAGATGCTGACGGCTTCACACACCCTGGCTGTGGACGCCAA GGGGGCCACCTGCCTGCGTCTTCCGCCCCTGCCTGCCATGTACCTCCCCTGCCTTGCTGTTGGTCATGTGGGTCT TCCAGGGGGAAGGCCAAGGGGAGTCACCTTCCCTTGCCACTTTGCACGACGCCCTCTCCCCACCCCTACCCCTGG CTGTACTGCTCAGGCTGCAGCTGGACAGAGGGGACTCTGGGCTATGGACACAGGGTGACGGTGACAAAGATGGCT

GAATTCCGCCGCTGACCGAGGCGTGCAAAGACTCCAGAATTGGAGGCATGATGAAGACTCTGCTGCTGTTTGTGG GGCTGCTGACCTGGGAGAGTGGGCAGGTCCTGGGGGACCAGACGGTCTCAGACAATGAGCTCCAGGAAATGT CCAATCAGGGAAGTAAGTACGTCAATAAGGAAATTCAAAATGCTGTCAACGGGGTGAAACAGATAAAGACTCTCA TAGAAAAAACAAACGAAGAGCGCAAGACACTGCTCAGCAACCTAGAAGAAGAAGAAGAAGAAGAAGAAGATGCCC TAAATGAGACCAGGGAATCAGAGACAAAGCTGAAGGAGCTCCCAGGAGTGTGCAATGAGACCATGATGGCCCTCT TGGTTGGCCGCCAGCTTGAGGAGTTCCTGAACCAGAGCTCGCCCTTCTACTTCTGGATGAATGGTGACCGCATCG ACTCCCTGCTGGAGAACGACCGCAGCAGACGCACATGCTGGATGTCATGCAGGACCACTTCAGCCGCGCGTCCA GCCTGCCCACCGGAGGCCTCACTTCTTCTCTCCCAAGTCCCGCATCGTCCGCAGCTTGATGCCCTTCTCTCCGT TCCACTTCCACAGCCCGGCCTTCCAGCACCGCCAACAGAATTCATACGAGAAGGCGACGATGACCGGACTGTGT GCCGGGAGATCCGCCACAACTCCACGGGCTGCCTGCGGATGAAGGACCAGTGTGACAAGTGCCGGGAGATCTTGT CTGTGGACTGTTCCACCAACAACCCCTCCCAGGCTAAGCTGCGGCGGGAGCTCGACGAATCCCTCCAGGTCGCTG AGAGGTTGACCAGGAAATACAACGAGCTGCTAAAGTCCTACCAGTGGAAGATGCTCAACACCTCCTCCTTGCTGG AGCAGCTGAACGAGCAGTTTAACTGGGTGTCCCGGCTGGCAAACCTCACGCAAGGCGAAGACCAGTACTATCTGC TTGACTCTGATCCCATCACTGTGACGGTCCCTGTAGAAGTCTCCAGGAAGAACCCTAAATTTATGGAGACCGTGG CGGAGAAAGCGCTGCAGGAATACCGCAAAAAGCACCGGGAGGAGTGAGATGTTGGATGTTTGCACCTTACG CAGGCCCCAGCCTCCAGGCCCCAACTCCGCCCAGCCTCTCCCCGCTCTGGATCCTGCACTCTAACACTCGACTC TGCTGCTCATGGGAAGAACAGAATTGCTCCTGCATGCAACTAATTCAATAAAACTGTCTTGTGAGCTGAAAAAAA AAAAAAAAAAAAAAAAGGAATTC

MMKTLLLFVGLLLTWESGQVLGDQTVSDNELQEMSNQGSKYVNKEIQNAVNGVKQIKTLIEKTNEERKTLLSNLE EAKKKKEDALNETRESETKLKELPGVCNETMMALWEECKPCLKQTCMKFYARVCRSGSGLVGRQLEEFLNQSSPF YFWMNGDRIDSLLENDRQQTHMLDVMQDHFSRASSIIDELFQDRFFTREPQDTYHYLPFSLPHRRPHFFFPKSRI VRSLMPFSPYEPLNFHAMFQPFLEMIHEAQQAMDIHFHSPAFQHPPTEFIREGDDDRTVCREIRHNSTGCLRMKD QCDKCREILSVDCSTNNPSQAKLRRELDESLQVAERLTRKYNELLKSYQWKMLNTSSLLEQLNEQFNWVSRLANL TQGEDQYYLRVTTVASHTSDSDVPSGVTEVVVKLFDSDPITVTVPVEVSRKNPKFMETVAEKALQEYRKKHREE

ATAGTGACAAGTTTGGAAGAAGGTCCAGCTATGGAGGAAGTTCATATGGGAATAGTACTAACAATGTCCCAGCAT CTTCCCCACAGCCTTGCACTACCAATCAAAATGGGAGGAGAATAATGAGCGATTATCTACATCCAATGGAAAGA TGTCACCAACTCGCTACCATGCAAACAGCATGGGTCAGAGGTCATACAGTTTTGAAGCCTCAGAAGAGGACCTAG ATGTAGATGATAAAGTGGAAGAATTAATGAGGAGGGACAGCAGTGTGATAAAAGAGGAAATCAAAGCCTTTCTTG TGCAGCAGGGATCAGACCTGAGTGAACAGAAGAAAAGAGCATTTTACCGATGGTATCAACTTGAGAAGACAAACC CTGGCGCTACACTAAGTATGAGACCAGCCCCCATTCCAATAGAGGACCCTGAATGGAGACAAACGCCTCCCCCAG TCTCTGCCACATCTGGTACTTTCCGACTGCGACGAGGGAGTCGATTTACCTGGAGAAAGGAGTGCCTGGCTGTTA TGGAAAGTTACTTCAATGAGAATCAATACCCAGATGAAGCAAAGAGGGAAGAAATTGCAAACGCTTGCAATGCAG TTATACAGAAGCCAGGCAAAAAGCTGTCAGATCTGGAAAGAGTTACCTCCCTGAAAGTATAAATTGGTTTGCTA ACAGAAGGAAGGAGATCAAGAGGAGAGCCAATATTGAAGCAGCAATCCTGGAGAGTCATGGGATAGATGTGCAGA GTCCAGGAGGCCACTCAAACAGTGATGATGTCGACGGGAATGACTACTCTGAGCAGGATGACAGTACGAGCCATA GTGACCACCAAGACCCCATCTCATTAGCTGTGGAAATGGCAGCAGTCAACCACACTATCTTGGCATTGGCCCGAC ${\tt AAGGAGCCAACGAAATCAAGACAGAGGCCCTGGATGATGAC} {\tt TGA} {\tt TCAGGGAGGTTAAACATGACAAGTTAACTTA}$ ${\tt GTTTAGACGTAGCACCTTAGCAGACTTTCCTCGGTCCTTAACATGTGTTCTTACAGTATAACTTGCAGTTTCTTG}$ ${\tt TATGTCAGGTAGCTGTTAGGGTCTTGTTCTGTGAAGATGGCATGGTGCCCTCAGCCTTTGCATATACTCTCTCAG}$ TCTTGCTGCTCCGTCTTAGCATTCCAAGAGAGTGCTTCCAGGTATTTAGATAGCCCTCAGTTCTCAAATATTAGA TAGGATGCAAGCTGAGGTCGTGGCACAGGAATGACAGCACCATTTGGGGAGTATCCACAGAGTCAAAGGAACAC TAGAATCCCCACCTCAGCGTGAGGATAATTGATTTCCAGCTGCAATAAGCCGTGCCTCATTATAGCCACACTGTG AACATGCCTGACACAGACATCCTTTCCTCTCACAAGCTGTGTGACTTAGTAGATAAAATACTGCCTTCTGCCTTT

MSPSPSNSYDTSPQPCTTNQNGRENNERLSTSNGKMSPTRYHANSMGQRSYSFEASEEDLDVDDKVEELMRRDSS VIKEEIKAFLANRRISQAVVAQVTGISQSRISHWLLQQGSDLSEQKKRAFYRWYQLEKTNPGATLSMRPAPIPIE DPEWRQTPPPVSATSGTFRLRRGSRFTWRKECLAVMESYFNENQYPDEAKREEIANACNAVIQKPGKKLSDLERV TSLKVYNWFANRRKEIKRRANIEAAILESHGIDVQSPGGHSNSDDVDGNDYSEQDDSTSHSDHQDPISLAVEMAA VNHTILALARQGANEIKTEALDDD

 ${\tt AGGTGGCGGAGATTGCACCGGAAGACGCTTCCTGGGTTTGAGGAGTTCAGTGACTGCTATTGAACCACCAAAAGT}$ CCATTATGAAACTGTATTGCCTGTCAGGGCACCCAACCTTACCATGCAATGTGCTCAAATTCAAATCAACCACCA TGTCCAATCTTCCTGGCTGGTCCCTGAAGGATGGAAATGCTTTCTTGGACAAGGAGCTAAAGGAGTGCTCGGGTC ATGTATTTGTGGATTCTGTGCCGGAATTCTGTTTACCAGAGACGGAGCTAATAGATCTGTCTACAGTAGATGTGA TTCTCATCTCTAACTATCACTGTATGATGGCGCTGCCATACATCACCGAGCACACCGGCTTCACAGGCACAGTGT ATGCCACGGAACCCACCGTCCAGATCGGCAGGCTTCTCATGGAAGAGCTGGTGAATTTCATTGAAAGAGTGCCAA AGGCTCAGTCTGCCTCCTTGTGGAAGAATAAGGACATTCAGAGGCTGTTACCTTCTCCTCTCAAGGATGCAGTGG AAGTCTCAACCTGGAGAAGATGCTATACAATGCAAGAGGTGAACTCTGCCCTTAGTAAAATCCAGCTGGTGGGAT ATTCTCAGAAAATTGAGCTTTTTGGTGCGGTCCAGGTGACTCCTCTGAGCTCTGGCTATGCCCTTGGGAGCTCCA ACTGGATCATCCAGTCTCATTACGAGAAAGTGTCTTATGTCTCTGGATCCTCCTTGCTTACCACACACCCCCAGC CCATGGACCAAGCTTCTCTCAAAAACAGCGATGTTCTTGTTCTGACAGGGCTTACCCAGATCCCCACTGCAAACC CAGATGGAATGGTGGGAGAGTTCTGCAGCAACCTAGCTCTGACAGTCCGGAATGGAGGAAACGTGTTGGTTCCCT GCTACCCTTCTGGAGTGATCTATGACCTCCTGGAGTGCCTATATCAGTACATCGACTCAGCCGGGCTTTCCAGCG CCCCCCTCTACTTCATCTCCCCTGTGGCCAACAGTTCACTGGAGTTTTCCCAGATCTTTGCTGAGTGGCTTTGTC ACAACAAACAGAGTAAGGTGTATCTTCCAGAACCACCTTTTCCTCATGCAGAGCTCATTCAGACCAATAAGCTGA CCCTCCGCTTCGGGGACGTGGTCCACTTCATGGAGCTCTGGGGAAAATCTAGTCTCAATACCGTCATATTCACGG AACCAGACTTCTCCTACCTGGAAGCCCTGGCTCCTTACCAGCCGCTGGCCATGAAATGCATCTACTGCCCCATCG ACACCCGGCTGAACTTCATCCAGGTGTCAAAGCTGCTTAAAGAAGTGCAGCCCCTGCACGTGTTGTCCTGAGC AGTACACTCAGCCGCCCCCAGCCCAGTCCCACAGGATGGACCTCATGATCGACTGCCAGCCCCCGCCCATGTCCT ATCGGCGGGCTGAGGTTCTCGCCCTGCCCTTCAAACGTCGGTACGAGAAGATCGAGATCATGCCAGAGCTCGCAG ATTCACTGGTGCCCATGGAGATCAAGCCTGGCATCTCCTTGGCAACTGTCTCGGCCGTGCTGCACACCAAAGATA ACAAGCACTTGCTTCAGCCCCCTCCTCGGCCCGCCCAGCCCACGAGCGGAAGAAGAGAAAGCGGGTGAGCGATG ACGTACCAGACTGCAAAGTCCTGAAGCCTTTGTTGAGCGGTTCCATCCCTGTGGAGCAGTTCGTGCAGACCCTGG AGAAGCATGGCTTCAGTGATATTAAGGTGGAGGACACAGCCAAGGGCCATATCGTCCTGCTCCAGGAGGCTGAGA CGCTCATCCAGATTGAAGAAGACTCGACCCATATCATCTGCGACAATGACGAGATGCTCAGAGTGCGACTGCGGG ACCTTGTCCTCAAATTCTTACAGAAGTTCTGAGTGGGCCATCTGAGCTACTTCCCTGAAATCCTGCAGTCCCTCA CTGGCTGCCCTCACAAGCCACCTGAGGAGTGGCATGAGAGGCCATTAACTGTGTCTTTGTGGTGTCCTCTGGCTT AAGGAGTGAAGAGGTGCCTCTTGAGGGAAATGGTCTGGACTTATTCCCAGCACTGTTTCAGGCAAGAACTTTCCC TTTCAACTTCAGGCTCATTTTCTTCTCAACTCTGGCTCTCTCAAGGAGCTGGAGGGTGACAGAAGTGGGACAGGA GGGAGCCAGCCTTTGGTTTCGTTTACTTGCCTACAGTGCTGTACGCAATAAGATGATCACCCAAAATATGGTAA AGTGAACCCATCTGTCTGCATTTTCTACTCTGAGCCCATTTGTTAATAAACACTTATTTTTATAT

MKLYCLSGHPTLPCNVLKFKSTTIMLDCGLDMTSTLNFLPLPLVQSPRLSNLPGWSLKDGNAFLDKELKECSGHV FVDSVPEFCLPETELIDLSTVDVILISNYHCMMALPYITEHTGFTGTVYATEPTVQIGRLLMEELVNFIERVPKA QSASLWKNKDIQRLLPSPLKDAVEVSTWRRCYTMQEVNSALSKIQLVGYSQKIELFGAVQVTPLSSGYALGSSNW IIQSHYEKVSYVSGSSLLTTHPQPMDQASLKNSDVLVLTGLTQIPTANPDGMVGEFCSNLALTVRNGGNVLVPCY PSGVIYDLLECLYQYIDSAGLSSAPLYFISPVANSSLEFSQIFAEWLCHNKQSKVYLPEPPFPHAELIQTNKLKH YPSIHGDFSNDFRQPCVVFTGHPSLRFGDVVHFMELWGKSSLNTVIFTEPDFSYLEALAPYQPLAMKCIYCPIDT RLNFIQVSKLLKEVQPLHVVCPEQYTQPPPAQSHRMDLMIDCQPPAMSYRRAEVLALPFKRRYEKIEIMPELADS LVPMEIKPGISLATVSAVLHTKDNKHLLQPPPRPAQPTSGKKRKRVSDDVPDCKVLKPLLSGSIPVEQFVQTLEK HGFSDIKVEDTAKGHIVLLQEAETLIQIEEDSTHIICDNDEMLRVRLRDLVLKFLQKF

PCT/US2003/028547

2731/6881 FIGURE 2512

GCGCCTTCACTTTGGAACTGACTCAGAGACCTAAAGAAGCCCACCTGGCCAGCGGGAAGGGGGCCGCCGCCGCC TCCCGGTTTTGGGCAGCCCTGGCCAGCTCCCTGTGGCCTTGGAGGACTTCCACCGGGCAGGCGTTCCCATGATGC CAGGCTACCAGGCGCGGGGGATTCCTGCAGGCCGGCGCTGCTTTTCTTAGAACCCCCTTTCTAGAAAAGTACACC TGGAGGTTTTGCTTCAAAGAGAGGGGAGAGGCAGCATGCGAGTGTCCTGTCCCGACGCCTTGGAAAGCGGTCC CTCCTGGGAGCCCGGGTGTTGGGACCCAGTGCCTCGGAGGGGCCCTCGGCTGCCCCACCCTCGGAGCCACTGCTA GCTCCCAGCACCTCGGGCCTTCAGCAGGTGGCCTTTCAGCCTGGGCAGAAGGTTTATGTGTGGTACGGGGGTCAA GAGTGCACAGGACTGGTGGAGCAGCACAGCTGGATGGAGGGTCAGGTGACCGTCTGGCTGCTGGAGCAGAAGCTG CAGGTCTGCTGCAGGGTGGAGGAGGTGTGGCTGGCAGAGCTGCAGGGCCCCTGTCCCCAGGCACCACCCCTGGAG CCCGGAGCCCAGGCCCTGGCCTACAGGCCCGTCTCCAGGAACATCGATGTCCCAAAGAGGAAGTCGGACGCAGTG GAAATGGATGAGGTGCCGGCCATGGTGCTGACGTCCCTGCAGCCCTGTTGTACAGAGTCCTCCCGGG ACCGAGGCCAACTTCTCTGCTTCCCGTGCGGCCTGCGACCCATGGAAGGAGAGTGGTGACATCTCGGACAGCGGC CCCAAGTATTTGGGGGATGCTTTTGGTTCTCCCCAAACTGATCATGGCTTTGAGACCGATCCTGACCCTTTCCTG CTGGACGAACCAGCTCCACGAAAAAGAACACTCTGTGAAGGTGATGTACAAGTGCCTGTGGCCAAACTGTGGC AAAGTTCTGCGCTCCATTGTGGGCATCAAACGACACGTCAAAGCCCTCCATCTGGGGGGACACAGTGGACTCTGAT CAGTTCAAGCGGGAGGAGTTTCTACTACACAGAGGTGCAGCTGAAGGAGGAATCTGCTGCTGCTGCTGCTGCT CTGTCTGCTCTTCCACCACCTCTGCACAAAGCCCAGTCCTCCGGCCCAGAACATCCTGGCCCGGAGTCCTCCCTG CCCTCAGGGGCTCTCAGCAAGTCAGCTCCTGGGTCCTTCTGGCACATTCAGGCAGATCATGCATACCAGGCTCTG CCATCCTTCCAGATCCCAGTCTCACCACACATCTACACCAGTGTCAGCTGGGCTGCTGCCCCCTCCGCCGCCTGC TCTCTCTCTCCGGTCCGGAGCCGGTCGCTAAGCTTCAGCGAGCCCCAGCAGCCACCAGCACCTGCGATGAAATCTCAT CTGATCGTCACTTCTCCACCCCGGGCCCAGAGTGGTGCCAGGAAAGCCCGAGGGGAGGCTAAGAAGTGCCGCAAG GTGTATGGCATCGAGCACCGGGACCAGTGGTGCACGGCGTGCCGGTGGAAGAAGGCCTGCCAGCGCTTTCTGGAC TGA GCTGTGCTGCAGGTTCTACTCTGTTCCTGGCCCTGCCGGCAGCCACTGACAAGAGGCCAGTGTGTCACCAGC CCTCAGCAGAAACCGAAAGAAGAACGGAAACACGGAGTTTGGGCTCTGTTGGCTAAGGTGTAACACTTAAAG

MASVLSRRLGKRSLLGARVLGPSASEGPSAAPPSEPLLEGAAPQPFTTSDDTPCQEQPKEVLKAPSTSGLQQVAF QPGQKVYVWYGGQECTGLVEQHSWMEGQVTVWLLEQKLQVCCRVEEVWLAELQGPCPQAPPLEPGAQALAYRPVS RNIDVPKRKSDAVEMDEMMAAMVLTSLSCSPVVQSPPGTEANFSASRAACDPWKESGDISDSGSSTTSGHWSGSS GVSTPSPPHPQASPKYLGDAFGSPQTDHGFETDPDPFLLDEPAPRKRKNSVKVMYKCLWPNCGKVLRSIVGIKRH VKALHLGDTVDSDQFKREEDFYYTEVQLKEESAAAAAAAAAGTPVPGTPTSEPAPTPSMTGLPLSALPPPLHKAQ SSGPEHPGPESSLPSGALSKSAPGSFWHIQADHAYQALPSFQIPVSPHIYTSVSWAAAPSAACSLSPVRSRSLSF SEPQQPAPAMKSHLIVTSPPRAQSGARKARGEAKKCRKVYGIEHRDQWCTACRWKKACQRFLD

2733/6881 FIGURE 2514A

ATGCTCCATGCTGCAAGCTGCAAGGAGGCCCAGGAGGGGTGTCCTCCTGGTGGAAGTTGCGCTTGTTGAAGATG ATTTATATAAAGAACGAACGAGAAAAAGAAGGAAATCAGATCGAGACCAGCGGTTCCGAGCATTTCCCTCCATGG AGCAGAGTGCTCTTAAGGAATATGAAAAATTGGAATCACGGACCAGAAGGGTTTTGAGCAACACTTATCAGAAAC TTATTCAGTCTGTCTTCCTGGATGACAGCATCCCTAATGGAGTCAAGTATCTCATAAATAGGCTTCTTGCCTTGA TTGAAAAGCCGACAGTGGACCCAATCTACATTGCATTATTTGGAAGCACTGGGGCTGGGAAGAGCTCCCTGATCA ATGCCATCATCCAGCAAGCAATGTTTCTACCAGTGTCTGGAGAAAGCATATGTACTTCCTGCATTGTACAAGTGA TGGAGGAAGCCACCTGGAAGCTACAAATGATTTATGGAAATGGGGCAGAGAGTAAGAACTATGAGGAGTTACTGA GGGCGAAGCCCAAAAGGAAGATCCCCACCTCCAGAGTCATCACCCTCAAGGCGGAAGAGGCAGAAGAGCTGTCCA TCAAGCTGGACCCCTACATCCGCACACAGAGGAGAGATTGGGATGGAGAGGCCGCTGAGATGCGCATCTGGCCCT TGATCAAACATGTGGAAGTGACACTTCCCAAATCCGACCTGATCCCAGAAGGGGTCGTGCTGGTGGACATCCCAG GCACAGGCGACTTCAACAGCAAGAGGGACGAGATGTGGAAAAAGACCATTGACAAGTGCTCAGTGATCTGGGTGA TCAGCGACATAGAGCGAGTTTCTGGGGGGCCAAGCCCACGAAGACCTTCTGAATGAGAGCATCAAAGCCTGCCAGC GGGGCTTCTGTAGGGACGTGGCCCTGGTGGTCACCAAGATGGACAAACTCCACTTGCCAGAATACCTAAGGTCCT CAAAAGTTTTAGAACTTCGGGAGAAGAGAAAACTGCCAGCTGACTTCAAGGTTCTGGAAGCCTCAGATCTGGTGT ATACAGTCAGCGCCCAGGAGTACTGGCAGCAGGCTCTCCTCACCGAGGAGGAAACCGAAATCCCTAAGTTAAGAG AATACATCAGGAAGAGCCTCTTGGACAAGAAGAAGAAGACGTGACCAAGTATGTGACTGAAGCCTTTGGCCTGT TGCTCCTCACAGATAGTTTCAACTCCACGCAAAACCTGCCGAATGAACACTTGCACATGAGTGTCCTGCGGAGAT TTGCGGAAGAGGTTGAGCTGCTGGAGAAGGCCATCGCACAGTGCTTCGCCTGCATGGAGCAGCCTCTGCAAG GTTTTCATCAGACCCTGAAAGCTGTTTGCCTGAAAAATGGCATCTATGCCTCCAGGACTCTGGCGAGAATTGATC TAAATGAAGCCCTCACTCAGCCCGTCTATGACCAGATCGACCCTGTTTTTGGAAGCATTTTTAGGACGGGGAAGC CCACTGGTTCAGCTCTGATGCCTCACATAGATGCTTTTAAGCAGTCCCTGCAGGAGAAAATGACAGAAATTGGGA TAAGAAGTGGCTGGAAATATGATAGCTGCAAAAAAAATTTCCTGATCCAGGAGATAAGTGCCATCCTCGGGGGCC TGGAGGACCACATCCTCAGAAGGAAGAGGAGGATCTACGAGTCCCTCACTGCCTCTGTCCAGAGTGACCTGAAGC TCTGTTACGAAGAGCCTCAGATCACGGCCAAAAAAGCGTGTGAGCGGATGAAAGATGCCATCAGAAGAGGGG TGGACCGGCAGGTGGCTGAGGGCATGTTTGAAAGGGCCCAGGAAAGGATGCAGCACCAGTTTCAGCAGCTGAAGG TACTCTATGCCCACATCCTGGATCCTAGACCCCGAGAGGCTCCGGGGGAGGAGGAAGCGAGTGCAGAAGACTG GAATCGTGGAGAAGGTGAAGGGCAGCATCACCACTATGCTGGCCCTTGCTTCGTCCCAGGGGGATGGCCTCTACA AGGAGCTTGCAGGCCTGAGCTGCAGGATGGGACAATGACAAATGGGACGTGGCCCCTTCCTCAGGAAGGGGAC AGCTGTTGCAGGGTGTGATGGAGAACAAAGCTATGTACCTACACACCGTCAGCGACTGTGACACCAGCTCCATCT GTGAGGATTCCTTTGATGGCAGGAGCCTGTCCAAGCTGAACCTGTGTGAGGATGGTCCATGTCACAAACGGCGGG CAAGCATCTGCTGTACCCAGCTGGGGTCCCTGTCGGCCCTGAAGCATGCTGTCCTGGGGCTCTACCTGCTGGTCT TCCTGATTCTTGTGGGCATCTTCATCTTAGCAGCCTGCTGCCACGCGTGCAGTTCCCGAGAGGACATGACCCAGG GCTTGCCAGCCCGTGCACGCATTTCACCCCTTGTATCCTGGGAGGTCCCTGACAGCAGAGGGTCCTGGTACCTGG GAACAGCCAGGGACAGAAGCTGGGACCCAGGAGCTGTGCAGCAGGGGCCTGAGTTGTCTGGGGAGAGCGCTTACC TGCCCACTCCTGTCCCCGGGGATCGGGACTTCCCAGAGGGTGAAGTGTCCAGGCCGCGCAGCTCCCCTGACGACC TGAAGGCCCTGACTCGCAATGTGAACCGGCTGAATGAGAGCTTCCGGGACTTGCAGCTGCGGCTGCTGCAGGCTC CGCTGCAAGCCGGACCTGACGGAGCAGGTGTGGAAGGTGCAGGACGCGCTGCAGAACCAGTCAGACTCGTTGCTGG CGCTGGCGGGCGCAGTGCAGCGGCTGGAGGGCGCTGTGGGGGCTGCAGGCGCGGTGCAGACCGAGCAGG CGGTGGCCCTGCTGCGGGACCGCACGGGCCAGCAGAGCGACACGGCGCAGCTGGAGCTCTACCAGCTGCAGGTGG AGAGCAACAGTAGCCAGCTGCTGCTGAGGCCCCACGCGGGCCTGCTGGACGGCTGGCGCGCAGGGTGGGCATCC TGGGCGAGGAGCTGGCCGACGTGGGCGGCGTGCTGCGCGGCCTCAACCACAGCCTGTCCTACGACGTGGCCCTCC ACCGCACGCGGCTGCAGGACCTGCGGGTGCTGAGCAACGCCAGCGAGACACGCCGCCTGCGCCTGGCGC ACGTAGGCATGGAGCTGCAGCTGAAGCAGGAGCTGGCCATGCTCAACGCGGTCACCGAGGACCTGCGCCTCAAGG ACTGGGAGCACTCCATCGCACTGCGGAACATCTCCCTCGCGAAAGGGCCCACCGGGACCCAAAGGTGATCAGGGGG ATGAAGGAAAGGAAGGCAGGCCTGGCATCCCTGGATTGCCTGGACTTCGAGGTCTGCCCGGGGAGAGAGGTACCC

2734/6881 FIGURE 2514B

CAGGATTGCCCGGGCCCAAGGGCGATGATGGGAAGCTGGGGGCCACAGGACCAATGGGCATGCGTGGGTTCAAAG
GTGACCGAGGCCCAAAAGGAGAAAGGAGAGAAAGGAGACAGAGCTGGGGATGCCAGTAAGGACATTCTGCTGG
GGCCGTGGGATATGATCATTACACGATTACTCTTGGCCATGCAGTACACATCAGACACTTCAACTGCCTTCTCTT
CAGTTGCTCATATCAGCTGA

 ${\tt MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLDRISVYYNEATGGKYVPRAILVDLEPGSHVS} \\ {\tt ISLCLALPLSPAVEASSIELSQCRNSPSRSSMPRT}$

 $\label{thm:condition} MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLDRISVYYNEATGGKYVPRAILVDLEPGTMDS\\ VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLQGFQLTHSLGGGTGSGMGTL\\ LISKIREEYPDRIMNTFSVVPSPEAESNMNDLVSEYQQYQDATAEEEEDFGEEAEEEA$

 ${\tt MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLDRISVYYNEATGGKYVPRAILVDLEPGTMDS} \\ {\tt VRSGPFGQIFRPATADTSPWLLSSVVGCP}$

MREIVHIQAGQRGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLDRISVYYSEATDGKYVPRAILVDLEPGTMDS VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLQGFQLTHSLGGGTGSGMGTL LISKIREEYPDRIMNTFSVVPSPKVSDTVIESYNATLSVHQLVENTDETYCIDNEALYDICFRTLRVTTPTYGDL NHLLRDTMSGVTTCLRFPGQLNADLCKLAVNMVPFPRLHFFMPGFAPLTSHGSQQYRALTVPELTQQVFDAKSMM AACDPRHGRYLTVAADFRGRMSMKEVDEQMFNVQNKNSSYFVEWIPNNIKTAVCDIPPRGLKMAVTFIGSSTAIQ ELFKHISEQFTAMFRRKAFLHWYTGEGMDEMEFTEADSNMNDLVSEYQQYQDATAEEEEDFGEEAKEEA

GGGGACGCCGAGGGCGCCGACGCCCGAGAGGCCGCGCTCTCCCACCTGTCACCCTGGCCCTTCTCTGCTT GGATGGTGTCTTCCTCTCAGCCGAGAATGACTTCGTCCACCGGATCCAGGAGGAACTGGACCGCTTTCTGCT GCAGAAGCAGCTGTCAAAGGTTCTTCTTTTCCCCCCACTCTCCAGTCGCCTCCGGTACCTGATCCATAGAACAGC AGAGAATTTTGATCTCTTGAGCAGCTTCTCCGTTGGGGAGGGCTGGAAGAGGAGGACGGTCATCTGTCACCAGGA CATCAGGGTACCCAGTTCGGATGGCCTCTCTGGCCCCTGCCGCGCTCCTGCCCCCAGCAGGTACCACGG TCCTCGGCCCATCTCCAACCAAGGAGCAGCTGCGGTTCCCCGAGGTGCCCGGGCTGGCCGGTGGTATCGTGGACG GCTCAAGAGAGAGGCCCCAGCTGGCAGGGACCCAGAAGAGCCTGGAGATGTTGGTGCTGGAGACCCCAACTCTGA ${\tt TCAGGGACTCCCTGTGCTG} \underline{{\tt ATG}} {\tt ACTCAGGGAACAGAGGACCTAAAGGGCCCAGGACAAAGGTGTGAGAATGAGCC}$ AGAGGAGGAAGAGGAGGAGGTGGAAGAGGATGGCCCCAGCAGCTGCTCGGAGGACGATTACAGTGAGCT GCTGCAGGAGATCACAGACAACCTGACGAAGAAGAGAGATTCAGATAGAGAAGATCCATTTGGACACATCCTCCTT CGTGGAGGAGCTGCCTGGAGAGAAGGACCTTGCCCACGTGGTAGAGATCTATGACTTTGAACCAGCGCTCAAGAC ${\tt GGAGGACCTGCTGGCAACGTTTTCTGAGTTCCAAGAGAGGGGTTCAGGATTCAGTGGGTTGATGATACTCACGC}$ ACTCGGCATCTTTCCCTGCCTGGCCTCAGCTGCGGAAGCCCTGACCCGGGAGTTCTCGGTGCTCAAGATCCGGCC $\texttt{GCCTGCTGTCCGGGGTCCGCCCC} \underline{\textbf{TGA}} \\ \texttt{GGCCTGGAGACCCAACTGGCCTGGATCTGCGTCCCGACGTAGCT}$ GGCGCCCCAACACCATAAGCCTTCACAGACGCCAGAGCAGCCCCGCACCACCCTCGAGCTTCACCATGGGGTGT GGTGGGCTTTAGTTTAGTCCCAGAAATGGAGAAAAAATAAAAACTCACGTTGTTCT

MTQGTEDLKGPGQRCENEPLLDPVGPEPLGPESQSGKGDMVEMATRFGSTLQLDLEKGKESLLEKRLVAEEEEDE EEVEEDGPSSCSEDDYSELLQEITDNLTKKEIQIEKIHLDTSSFVEELPGEKDLAHVVEIYDFEPALKTEDLLAT FSEFQEKGFRIQWVDDTHALGIFPCLASAAEALTREFSVLKIRPLTQGTKQSKLKALQRPKLLRLVKERPQTNAT VARRLVARALGLQHKKKERPAVRGPLPP

TTTAGTCTTCAGAAAGGCAACAGTAGTCTTTTAACGTCACTGTTAAAAGTGTAAGACTCTTTTACTCCCTGAGAG TCTGTCGCCCAGGCTGGAGTGCAGTGGCGCGATCTCGGCTCACTGCAAACTCCGCCTCCCGGGTTCACCCTTTCT CTTTATTCTTATCCCGGTCAGACTCGCCCCCTCCTCCAAGACATCTCTCTGTTTTATTTTATTTTGATTTTAGTTC TCTTTGGGTGATCGCTCCTTCCACCGGATCCCTCCCCGCCTCCATCCTCGTTCTGTGGGAGAGCCAGC CTTCTGGTGCTGCAGTCAGGAATGGAGCTTGACAGCGCTCTGGAAGCCCCATCGCAGGAAGACTCTAATTTGTCC CGAGGCAATGTAAAAGATGCAGTTCTTAAAGACCTCGGTGATCTAATAGAAGCCACAGAATTTGATAGGTTATTT GAGGGGACTGGTGCACGGCTCCGCGGAATGCCGGAGACACTGGGGCAGGTAGCAAAAGCCCTGGAGAAGTATGCA GCCCCCTCCAAGGAGGAGGAAGGTGAAGGTGATGGGCACTCCGAAGCGGCCGAGAAAGCAGCCCAAGTTGGGTTA CTGTTTCTTAAACTGTTAGGGAAAGTTGAGACTGCTAAGAATTCCCTGGTCGGCCCTGCATGGCAGACGGGCCTG CATCACTTGGCAGGACCCGTTTATATTTTTGCCATCACACACGCTTGGAGCAACCATGGACCACTCCGAGATCT $\tt CGGGAAGTTGCTAGGGAGGTGCTCACCTCACTGCTTCAAGTTACTGAATGCGGTTCTGTGGCAGGATTCCTACAT$ GGAGAAAATGAAGATGAGAAAGGGAGACTTTCGGTGATACTAGGGCTTCTCAAACCCGACTTGTATAAGGAATCC TGGAAGAATAACCCTGCCATCAAACATGTTTTCTCATGGACTCTGCAACAGGTCACTCGGCCCTGGCTGAGCCAG CATCTGGAAAGGGTACTTCCCGCATCATTGGTCATTTCAGATGACTATCAGACTGAGAACAAAATCCTGGGTGTA CACTGTCTCCATCACATTGTGCTTAATGTG

WO 2004/030615 PCT/US2003/028547

2747/6881 FIGURE 2527

AAGTGTCCCCTCCTACTTCTTGCTGCCTCACGGTTGCTGTTGCAGACCCAGGAGTCTCTGAAGGCTTCCGCGGCT TTGGGGCCGGTTGTGAGATGCCAGGCAGAGGCCGCTGCCCGGACTGCGGGCTCCACGGAGCTGGTGGAAGACTCGC ACTATTCGCAGAGCCAGCTGGTGTGCTCCGACTGCGGCTGCGTGGTCACCGAGGGGGGTCCTTACCACTACCTTCA AACGAGGTCTCCGGCGAGTGAGAGACCTTTGTCGAGTTCTGCAGTTGCCACCAACATTTGAGGATACCGCGGTTG GCTGCGTCTTAATCACCTGCCGACAGCATAACTGGCCCCTAACAATGGGGGCCCATCTGCACGCTGTTGTATGCAG ATTTGGATGTGTTTTCTAGCACTTGCATGCAGATAGTGAAGCTCCTGGGACTGGATGTGCCATCTCTGTGCTTGG AAGACAAAGAGAAGATGCTGTCTCGAACAATGCAGTTGGTGGAGCTGGCAAATGAGACGTGGCTGGTGACCGGGA GGCATCCCTTGCCCGTCATCACTGCTGCGACTTTCCTGGCTTGGCAGTCGCTGCAGCCTGCAGATCGGCTTTCAT GTTCCCTTGCCCGATTTTGTAAATTGGCAAATGTGGACCTGCCCTACCCGGCGTCCTCCCGCCTGCAGGAGCTGC TGGCTGTGCTGCTGCGGATGGCTGAGCAGCTGGCCTGGTTACGAGTTCTGAGACTTGACAAACGGTCTGTGGTGA AGCACATCGGTGACCTTCTCCAGCACCGCCAGTCACTGGTCCGCTCTGCCTTTCGGGATGGGACAGCAGAAGTGG AGACCCGAGAGAAGGACCACCGGGTGGGGACAGGGGCAAGGAGAAGGGGAGAATAATTCCTTAGGTT TACCCCAGGGGAAGCGGCCGGCCAGTCCTGCCCTTCTCTTGCCACCCTGCATGTTGAAGTCCCCGAAGCGGATCT GCCCTGTACCCCCTGTCTCCACTGTCACTGGAGATGAGAACATTTCTGATAGTGAAATAGAACAGTATTTGCGTA GATGGATATCCACTGGGAGCACTTCATCCTGTTCTGACAGCTTGATAACATTCCTGTTATAACCAAGGATGGAAG TGTACACCAGTCCGTAGGTATTGCTTTTCTTGTTTGAAGGAACCAAGAGGGGCTCTGCCATTAGTTGGACCCTGG TTTGAATTGGACACACTGCTGCGGCTCCTCCTGCAGGCCTGAGGGGGGCTTCCCTCTGCTTGTGGAGTGGTTGGCA TTCCCAGCAGTATCAACCCTCAGAGGAGCGGGAACTGGGGGAATTCTGGCCCTACGTGCATTCACAGGCAATGATG GGTTTGTGTGTATGGTGTCATGAGATCCTCTACCTCATAACAAAAGGACAGTGGGTAGACTAAGGCAGTAGCTCA AAGGGCTTTGCAAAATTTTAATATTAAAACAAGAGGCATCTGCTAGAAAACATTCTATTGTATAAAACCCGAG TTCTT

i

MPGRGRCPDCGSTELVEDSHYSQSQLVCSDCGCVVTEGVLTTTFSDEGNLREVTYSRSTGENEQVSRSQQRGLRR VRDLCRVLQLPPTFEDTAVAYYQQAYRHSGIRAARLQKKEVLVGCCVLITCRQHNWPLTMGAICTLLYADLDVFS STYMQIVKLLGLDVPSLCLAELVKTYCSSFKLFQASPSVPAKYVEDKEKMLSRTMQLVELANETWLVTGRHPLPV ITAATFLAWQSLQPADRLSCSLARFCKLANVDLPYPASSRLQELLAVLLRMAEQLAWLRVLRLDKRSVVKHIGDL LQHRQSLVRSAFRDGTAEVETREKEPPGWGQGQGEGEVGNNSLGLPQGKRPASPALLLPPCMLKSPKRICPVPPV STVTGDENISDSEIEQYLRTPQEVRDFQRAQAARQAATSVPNPP

GGCGGCGCAAGGGCGGGAGCGGTCGCCGCGGGATTTGGAGCTGCCTAGCCTCGCGGTCGCTTTGGCAGCA TGTAAGCAGCTGTTTGCCAAGAACCCAGGTCACTGCTAAGAAAGGGTGCCTTCGGGAGAAGAGTGTCCAGAGGAT ACCAATGCCAGATGCATCTGGAGTTACACTCAGCACTCGCAGTATGAGACATTGTGTGCCAGCATCTCTTTCCTT GGGGCCAGATATGAACTCTCTACCATGAACATGGTTCTCGGCTTATGAAGGAÁTTTTAAGTAAAACAGTTATTTA ATTTCCACATATTCAAGTCAAAAGCCTTCTGTGTGAAGTGCCAGTGATTACCCCTCCACAGGAGTTATCAGGATT TTTCTGGCACCAAGTTTAATTCTTCTTCGTACTTCTGGTAGTGACAGATCTGCAGGACAGATTTATCTGTTGAAT GCTCTTGGGCAGGAAAACCATGTAAAACCTCTGGAAGCAGCATCAGGACAGCAGAGCAGAGCCCCCGTCCTCACT GCTCACTTGCACAGAAACTCCATCTGGACTCGGATGCTTTTACTGAAGACCCATCTAGCTTCAATCATCTTTAGA GTCCATCCATTCTGGAGAGACCTGGCGTTTGCAGTTGCCTCTGTGGCCGTGTTTTTCTGTCATTCTGTTCCCAG GCCTTCTATTCAGGCGGTTGAAGGGTGTGGACTTTGGAATGGGGTTTGCTGTTCTTCGGGAACTTGCTTCCTTTC CCTGGCTGGTGCTGTCAGGAAGGACCATCTGAAGGCTGCAATTTGTTCTTAGGGAGGCAGGTGCTGGCCTGGCCT GGATCTTCCACCATGTTCCTGCTGCCTTTTGATAGCCTGATTGTCAACCTTCTGGGCATCTCCCTGACTGTC CTTTACAAGCCCTACACCAACGGAATCATTGCAAAGGATCCCACTTCACTAGAAGAAGAAGATCAAAGAGATCGT CGAAGTGGTAGTAGGACTCTGGACAACACTCCAGAGTTCGAGCTCTCTGACATTTTCTACTTTTGCCGGAAA GGAATGGAGACCATTATGGATGATGAGGTGACAAAGAGATTCTCAGCAGAAGAACTGGAGTCCTGGAACCTGCTG AGCAGAACCAATTATAACTTCCAGTACATCAGCCTTCGGCTCACGGTCCTGTGGGGGGTTAGGAGTGCTGATTCGG TACTGCTTTCTGCTGCCGCTCAGGATAGCACTGGCTTTCACAGGGATTAGCCTTCTGGTGGTGGGCACAACTGTG GTGGGATACTTGCCAAATGGGAGGTTTAAGGAGTTCATGAGTAAACATGTTCACTTAATGTGTTACCGGATCTGC GTGCGAGCGCTGACAGCCATCACCATCACCATGACAGGGAAAACAGACCAAGAAATGGTGGCATCTGTGTGGCC AATCATACCTCACCGATCGATGTGATCATCTTGGCCAGCGATGGCTATTATGCCATGGTGGGTCAAGTGCACGGG GGACTCATGGGTGTGATTCAGAGAGCCATGGTGAAGGCCTGCCCACACGTCTGGTTTGAGCGCTCGGAAGTGAAG GAAGGAACCTGCATCAATAATACATCGGTGATGATGTTCAAAAAGGGAAGTTTTGAAATTGGAGCCACAGTTTAC CCTGTTGCTATCAAGTATGACCCTCAATTTGGCGATGCCTTCTGGAACAGCAGCAAATACGGGATGGTGACGTAC CTGCTGCGAATGATGACCAGCTGGGCCATTGTCTGCAGCGTGTGGTACCTGCCTCCCATGACTAGAGAGGCAGAT GATGGGGGCCTGAAGAGGGAGAAGGTGAAGGACACGTTCAAGGAGGAGCAGCAGAAGCTGTACAGCAAGATGATC GGGCTCAGAGCTGGAGTTGCCGCCGCCCCCCACTGCTGTCCTTTCCAGACTCCAGGGCTCCCCGGGCTGCT CTGGATCCCAGGACTCCGGCTTTCGCCGAGCCGCAGCGGGATCCCTGTGCACCCGGCGCAGCCTACCCTTGGTGG TCTAAACGGATGCTGCTGGGTGTTGCGACCCAGGACGAGATGCCTTGTTTCTTTTACAATAAGTCGTTGGAGGAA TGCCATTAAAGTGAACTCCCCACCTTTGCACGCTGTGCGGGCTGAGTGGTTGGGGAGATGTGGCCATGGTCTTGT GCTAGAGATGGCGGTACAAGAGTCTGTTATGCAAGCCCGTGTGCCAGGGATGTGCTGGGGGGCCGCCACCCGCTCT CCAGGAAAGGCACAGCTGAGGCACTGTGGCTGGCTTCGGCCTCAACATCGCCCCCAGCCTTGGAGCTCTGCAGAC ATGATAGGAAGGAAACTGTCATCTGCAGGGGCTTTCAGCAAAATGAAGGGTTAGATTTTTATGCTGCTGCTGATG GGGTTACTAAAGGGAGGGGAAGAGGCCAGGTGGGCCGCTGACTGGGCCATGGGGAGAACGTGTTCGTACTCCA GGCTAACCCTGAACTCCCCATGTGATGCGCGCTTTGTTGAATGTGTGTCTCGGTTTCCCCATCTGTAATATGAGT ATCACGTTCAGTGTTTCAAGTACAGGCCCACAAAACGGGGCACGGCAGGCCTGAGCTCAGAGCTGCACTGGG CTTTGGATTTGTTCTTGTGAGTAAATAAAACTGGCTGGTGAATG

MFLLLPFDSLIVNLLGISLTVLFTLLLVFIIVPAIFGVSFGIRKLYMKSLLKIFAWATLRMERGAKEKNHQLYKP
YTNGIIAKDPTSLEEEIKEIRRSGSSKALDNTPEFELSDIFYFCRKGMETIMDDEVTKRFSAEELESWNLLSRTN
YNFQYISLRLTVLWGLGVLIRYCFLLPLRIALAFTGISLLVVGTTVVGYLPNGRFKEFMSKHVHLMCYRICVRAL
TAIITYHDRENRPRNGGICVANHTSPIDVIILASDGYYAMVGQVHGGLMGVIQRAMVKACPHVWFERSEVKDRHL
VAKRLTEHVQDKSKLPILIFPEGTCINNTSVMMFKKGSFEIGATVYPVAIKYDPQFGDAFWNSSKYGMVTYLLRM
MTSWAIVCSVWYLPPMTREADEDAVQFANRVKSAIARQGGLVDLLWDGGLKREKVKDTFKEEQQKLYSKMIVGNH
KDRSRS

GAACCCTAGGTTGTTGGATGATGTCAGCTTCCATCCTTGTGTTCGTTTCAAACGCTGGGAATCTGAGCGCATCCT CTCCTTCATCCCTCCTGATGGAAACTTCCGCCTGCTGTCTTACCATGTCAGTGCACAGAATCTGGTTGCAATCCC AGTGTATGTCAAACATAACATCAGTTTCCGGGACAGTAGTTCCCTTGGACGCTTTGAAATAACGGTGGGACCCAA ACAAAAGCTACCAAGTTTGAAGGGGACCATGAGTCTTCAGGCTGGAGCTTCCAAACCAGATGAAAAACCCCACAAT GTACAAACCCTTTAAGGGCATAAAATACATGACCAAAGCTGGGAAGTTCCAAGTTCGAACCTGAAGGGAGCATTT AGGTCAGTCCCCTCCTGGACCCACCCGCTCCCTTTTTTCCTTAGCCTTCAGTGCCATGGAACTAATCAAGGGAGG AAAAGGTCACCAGGGAGAACTGGACAGAACTGAAACACCAGCAACACCAGTTCTCAAGGACAAGGTGTGTGATGGG GGTAGGAAGCTTGGTGCTTATGTAACCATTTTAAACGTGGTTTCTATAGGAAAGACCAACATTTGTTTAGCTTGC AAAGAAGTAAAGGAGTTAGGAGGAGACACTTAAATGAAAGATTGGCAAGAAAAGCAGTCGGACTCTACCTTAAGG AGGGATGGGAAGGAAAGAGTTGAGTTGGTTTCTTTCTGATTCCTCTACTCATGTAGAAAACACTTGTACTTCTGG AAATGGACTGGAGACTTTTTAAATTTGAGTCCACTATTGACATGGAAACCCCAGTGGAATCAGATTTTCCCTCAA AGACCATGATGGTATCGGACTAGTTTTCAGACACTGCCTGTTGCTGTCCATCAGCACTTGGTCTCTTATCTTCAG TGAGAAGGTGACCCGCCTTCTTCCCATGGTGGCTGCCTAAAGTGCTTCTTTTCTAACCCAAAACAGTTCTACTCA CTTCCTTTTACAGAATTCACCGGCCATTTTCCTGTTACCTGATCCTTCTACAGGATTTTTAAAAAGTAAGAGAGT TTCAGAGAAGCCGATCCCATAATCCCCAGTGCAGCCAGGGTTTGTGTGTCATCGTACTGGAGTAGAGGGCCGACT CTTCCCATGAAGGTGAGCACAGCTGTGAGTGAGTGAGCTCATATCTCCATTTGTCAGTGCTGGACTGGTACCAGA TCGTAACCTTCCCGTTGGTCGGAAACTTTTCCATCTGTCGCCCTAGAAAAAGAGAAAGCTTACCATCGAGGGTGT GGTTGATCCTTGAAGCTGCTTGGTAAAGTTATCATTTCCTCAGTCTTTTCTTTTGTACTCCTAICATGTATTCAT TAATATCTACCAGTCCCTTTTCATTCTAAGACAAAACATTTCTCCTAAATCTCTGAATAAAATCAGTGCTGTAGG AAGATGGACTGTGTTGATCATGGGTGTAAGCAACCCAGTTTAAGAAACATGGCAACTAAAGGGATACCTCAGGCT TTCTTTCCCAGTGGGTCATTTTTGTCCTAGTTCAGTGTGTCTGTTACTATTTAAATATTTATACAAAAGGGTTTT TGTTTATAGCTTAAGGAATGATACTGTGCTCTGCTTGGTGCATGGAGAAAAAGGAAGACCCATACTCTCCACACC CTAGAGCTTTTCTCTAAATATTGTGCAAAGTTTTTGCTAGTTTTATCTTCTGACTTTGGGACTAGTTTTTGCTGC AGAGTTGTGTTGCTTTGTGATTTTCCTCTGGGATAGTGTACTGTACACAACCAGATGTGTTCCACACTCCGTGAC TCCGCAGTTTGTCCTGGAGTGACATACACATCCACCATGGAAAGGGAAGCATCTCTGCCTGTGGATTCTCAAGTA CTTGGAAGCACCTCTCCTGAGGAACCTACAGGATTCTAAGGTTTCCTAGGTCACTGAACAACTAATCTTGGTCCC TGAATATTTCTAGGTTTGTAAGTGCAGCAGTTTTATTTCCTCTAGAACTCATCCTGTTTCAAGGGAAGTACCTAA GAAGATATAGAGTGTTTCTAGGGTAAGGGACCTGCAGGTGTAAGCATAGATGAAATAACTGTCCTGTCACACGTG CAGCAGGCCATGGAGTGTAGCGGGCATCGCTGCCGCCATTCCTGCAGCATCACCATAAGCAGTGCAGGGTGTCTC CATCGAGCTGTTTGGTTCCATGTGTTTTAACATGTGCAGAAGTAGCTTCTCTGTTTAAGTTTAATAAAGTTGAG TTTCACCAGTC

ATGGCCCTGTCCACTGAGCATCCTCCCGCCACACAGAAACCCGCCCAGCCGGGGCCACCGACCCCACCCCTGCC TGGAAACTTAAGGAGGCCGGAGCTGTGGGGAGCTCAGAGCTGAGATCCTACAGGAGTCCAGGGCTGGAGAGAAAA AAGAGGAGCCAGATCTTACCAAGTGATCTGCAGAGATGAAAAAACGCAGATGATATACCAGCAACATCAGTCATG GCTGCGCCCTGTGCTCAGAAGCAACCGGGTGGAATATTGCTGGTGCAACAGTGGCAGGGCACAGTGCCACTCAGT GCCTGTCAAAAGTTGCAGCGAGCCAAGGTGTTTCAACGGGGGCACCTGCCAGCAGGCCCTGTACTTCTCAGATTT CGTGTGCCAGTGCCCGAAGGATTTGCTGGGAAGTGCTGTGAAATAGATACCAGGGCCACGTGCTACGAGGACCA GGGCATCAGCTACAGGGGCACGTGGAGCACAGCGGAGAGTGGCGCCGAGTGCACCAACTGGAACAGCAGCGCGTT GGCCCAGAAGCCCTACAGCGGGCGGAGGCCAGACGCCATCAGGCTGGGCCTGGGGAACCACAACTACTGCAGAAA CCCAGATCGAGACTCAAAGCCCTGGTGCTACGTCTTTAAGGCGGGGAAGTACAGCTCAGAGTTCTGCAGCACCCC GTCGGGTGCCTCCTGCCTCCGTGGAATTCCATGATCCTGATAGGCAAGGTTTACACAGCACAGAACCCCAGTGC CCAGGCACTGGGCCTGGGCAAACATAATTACTGCCGGAATCCTGATGGGGATGCCAAGCCCTGGTGCCACGTGCT GAAGAACCGCAGGCTGACGTGGGAGTACTGTGATGTGCCCTCCTGCTCCACCTGCGGCCTGAGACAGTACAGCCA GCCTCAGTTTCGCATCAAAGGAGGGCTCTTCGCCGACATCGCCTCCCACCCTGGCAGGCTGCCATCTTTGCCAA GCACAGGAGGTCGCCCGGAGAGCGGTTCCTGTGCGGGGGCATACTCATCAGCTCCTGCTGGATTCTCTCTGCCGC CCACTGCTTCCAGGAGAGGTTTCCGCCCCACCACCTGACGGTGATCTTGGGCAGAACATACCGGGTGGTCCCTGG CGAGGAGGAGCAGAAATTTGAAGTCGAAAAATACATTGTCCATAAGGAATTCGATGACGACATTACGACAATGA CATTGCGCTGCTGCAGCTGAAATCGGATTCGTCCCGCTGTGCCCAGGAGAGCAGCGTGGTCCGCACTGTGTGCCT TCCCCGGCGGACCTGCAGCTGCCGGACTGGACGGAGTGTGAGCTCTCCGGCTACGGCAAGCATGAGGCCTTGTC TCCTTTCTATTCGGAGCGGCTGAAGGAGGCTCATGTCAGACTGTACCCATCCAGCCGCTGCACATCACAACATTT ACTTAACAGAACAGTCACCGACAACATGCTGTGTGCTGGAGACACTCGGAGCGGCGGGCCCCAGGCAAACTTGCA CGACGCCTGCCAGGGCGATTCGGGAGGCCCCCTGGTGTCTCGAACGATGGCCGCATGACTTTGGTGGGCATCAT CAGCTGGGGCCTGGGCTGTGGACAGAAGGATGTCCCGGGTGTGTACACCAAGGTTACCAACTACCTAGACTGGAT GAAGACACTGCAAAGGCGCAGTGCTTCTCTACAGACTTCTCCAGACCCACCACCACCACAGAAGCGGGACGAGACC CCATGCCACCCTGTTTTCAGCTAAAGCCCAACCTCCTGACCTGTCACCGTGAGCAGCTTTGGAAACAGGACCACA AAAATGAAAGCATGTCTCAATAGTAAAAGATAACAAGATCTTTCAGGAAAGACGGATTGCATTAGAAATAGACAG TATATTTATAGTCACAAGAGCCCAGCAGGGCCTCAAAGTTGGGGCAGGCTGGCCGGTCATGTTCCTCAAAA GCACCCTTGACGTCAAGTCTCCCTTTCCCCACTCCCTGGCTCTCAGAAGGTATTCCTTTTGTGTACAGTG TGTAAAGTGTAAATCCTTTTTCTTTATAAACTTTAGAGTAGCATGAGAGAATTGTATCATTTGAACAACTAGGCT TCAGCATATTTATAGCAATCCATGTTAGTTTTTACTTTCTGTTGCCACAACCCTGTTTTATACTGTACTTAATAA ATTCAGATATATTTTTCACAGTTTTTCC

MDAMKRGLCCVLLLCGAVFVSPSQEIHARFRRGARSYQVICRDEKTQMIYQQHQSWLRPVLRSNRVEYCWCNSGR AQCHSVPVKSCSEPRCFNGGTCQQALYFSDFVCQCPEGFAGKCCEIDTRATCYEDQGISYRGTWSTAESGAECTN WNSSALAQKPYSGRRPDAIRLGLGNHNYCRNPDRDSKPWCYVFKAGKYSSEFCSTPACSEGNSDCYFGNGSAYRG THSLTESGASCLPWNSMILIGKVYTAQNPSAQALGLGKHNYCRNPDGDAKPWCHVLKNRRLTWEYCDVPSCSTCG LRQYSQPQFRIKGGLFADIASHPWQAAIFAKHRRSPGERFLCGGILISSCWILSAAHCFQERFPPHHLTVILGRT YRVVPGEEEQKFEVEKYIVHKEFDDDTYDNDIALLQLKSDSSRCAQESSVVRTVCLPPADLQLPDWTECELSGYG KHEALSPFYSERLKEAHVRLYPSSRCTSQHLLNRTVTDNMLCAGDTRSGGPQANLHDACQGDSGGPLVCLNDGRM TLVGIISWGLGCGQKDVPGVYTKVTNYLDWIRDNMRP

ATGGCCCTGTCCACTGAGCATCCTCCCGCCACACAGAAACCCGCCCAGCCGGGGCCACCGACCCCACCCCTGCC $\tt TGGAAACTTAAGGAGGCCGGAGCTGTGGGGAGCTCAGAGCTGAGATCCTACAGGAGTCCAGGGCTGGAGAGAAAA$ CCTCTGCGAGGAAAGGGAGGAGCAAGCCGTGAATTTAAGGGACGCTGTGAAGCAATCATGATGCAATGAAGAG AAGAGGAGCCAGATCTTACCAAGTGATCTGCAGAGATGAAAAAACGCAGATGATATACCAGCAACATCAGTCATG GCTGCGCCCTGTGCTCAGAAGCAACCGGGTGGAATATTGCTGGTGCAACAGTGGCAGGGCACAGTGCCACTCAGT GCCTGTCAAAAGTTGCAGCGAGCCAAGGTGTTTCAACGGGGGCACCTGCCAGCAGGCCCTGTACTTCTCAGATTT CGTGTGCCAGTGCCCGAAGGATTTGCTGGGAAGTGCTGTGAAATAGATACCAGGGCCACGTGCTACGAGGACCA GGGCATCAGCTACAGGGGCACGTGGAGCACAGCGGAGAGTGGCCCCGAGTGCACCAACTGGAACAGCAGCGCGTT GGCCCAGAAGCCCTACAGCGGGCGGAGGCCAGACGCCATCAGGCTGGGCCTGGGGAACCACAACTACTGCAGAAA CCCAGATCGAGACTCAAAGCCCTGGTGCTACGTCTTTAAGGCGGGGAAGTACAGCTCAGAGTTCTGCAGCACCCC GTCGGGTGCCTCCTGCCTCCGTGGAATTCCATGATCCTGATAGGCAAGGTTTACACAGCACAGAACCCCAGTGC CCAGGCACTGGGCCTGGGCAAACATAATTACTGCCGGACTGGACGGAGTGTGAGCTCTCCGGCTACGGCAAGCAT GAGGCCTTGTCTCCTTTCTATTCGGAGCGGCTGAAGGAGGCTCATGTCAGACTGTACCCATCCAGCCGCTGCACA TCACAACATTTACTTAACAGAACAGTCACCGACAACATGCTGTGTGCTGGAGACACTCGGAGCGGCGGGCCCCAG GCAAACTTGCACGACGCCTGCCAGGGCGATTCGGGAGGCCCCCTGGTGTGTCTGAACGATGGCCGCATGACTTTG GTGGGCATCATCAGCTGGGGCCTGGGCTGTGGACAGAAGGATGTCCCGGGTGTGTACACCAAGGTTACCAACTAC $\tt CTAGACTGGATTCGTGACAACATGCGACCGTGACCAGGAACACCCGACTCCTCAAAAGCAAATGAGATCCCGCCT$ GGGACGAGACCCTACAGGAGAGGGAAGAGTGCATTTTCCCAGATACTTCCCATTTTGGAAGTTTTCAGGACTTGG TCTGATTCAGGATACTCTGTCAGATGGGAAGACATGAATGCACACTAGCCTCTCCAGGAATGCCTCCTCCTGG GCAGAAAGTGGCCATGCCACCTGTTTTCAGCTAAAGCCCAACCTCCTGACCTGTCACCGTGAGCAGCTTTTGGAA ACAGGACCACAAAATGAAAGCATGTCTCAATAGTAAAAGATAACAAGATCTTTCAGGAAAGACGGATTGCATTA GTTCCTCAAAAGCACCCTTGACGTCAAGTCTCCTTCCCCTTTCCCCACTCCCTGGCTCTCAGAAGGTATTCCTTT TGTGTACAGTGTGTAAAGTGTAAATCCTTTTTCTTTATAAACTTTAGAGTAGCATGAGAGAATTGTATCATTTGA ACAACTAGGCTTCAGCATATTTATAGCAATCCATGTTAGTTTTACTTTCTGTTGCCACAACCCTGTTTTATACT

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KYSSEFCSTPACSEGNSDCYFGNGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNPSAQALGLGKHNYCRNPD
GDAKPWCHVLKNRRLTWEYCDVPSCSTCGLRQYSQPQFRIKGGLFADIASHPWQAAIFAKHRRSPGERFLCGGIL
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ESSVVRTVCLPPADLQLPDWTECELSGYGKHEALSPFYSERLKEAHVRLYPSSRCTSQHLLNRTVTDNMLCAGDT
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MALGLCRCFHPRHSMAAFGLFPALPSALNSHPACTCLLDPSTWRPAHVSGPALASSPQILSVFSLGFPGFVNGSC VSRYKPDIIFPPGLPPPDLPSSVSIFCLQLLCSHGHCCITESGPLLSFSNWPPSLVPHFLKSPVHCHQIKLSPAR SPLSEKPPLTWKHHCLAHILTYPPSRLDPHTSFQPPLPLHSLLSPPPPHPLVSPPL

2763/6881 FIGURE 2543A

CAGAGATCCAGAAAGTGAGACAGATAATGACTCCCAGGAAATATTTAAGTTGGCAAAAGATGTGCTGATTCAAGG ATTGATCGATGAGAACCCTGGACTTCAATTAATTATTCGAAATTTCTGGAGCCATGAAACTAGGTTACCTTCAAA TACCTTGGACCGGTTGCTGGCACTAAATTCCTTATATTCTCCTAAGATAGAAGTGCACTTTTTAAGTTTAGCAAC AAATTTTCTGCTCGAAATGACCAGCATGAGCCCAGATTATCCAAACCCCATGTTCGAGCATCCTCTGTCAGAATG CGAATTTCAGGAATATACCATTGATTCTGATTGGCGTTTCCGAAGTACTGTTCTCACTCCGATGTTTGTGGAGAC GGACATTAGCTGTCAGCACGCAGCCCTGCTGAGCCTCGACCCAGCGGCTGTTAGCGCTGGTTGCCTGGCCAGCCT AGTCCGTGGGAAGGCCCGCCTCCTCATGTCCTCAGATGGGTGGAGCTTGCTAAGCTGTATAGATCAATTGG AGAATACGACGTCCTCCGTGGGATTTTTACCAGTGAGATAGGAACAAAGCAAATCACTCAGAGTGCATTATTAGC AGAAGCCAGAAGTGATTATTCTGAAGCTGCTAAGCAGTATGATGAGGCTCTCAATAAACAAGACTGGGTAGATGG TGAGCCCACAGAAGCCGAGAAGGATTTTTGGGAACTTGCATCCCTTGACTGTTACAACCACCTTGCTGAGTGGAA XXXXXXXXXXXXXXXXXXXTATTGATGTCCTCTTACACCAAAGTAGACTCACCAAATTGCAGTCTGTACAGGC TTTAACAGAAATTCAGGAGTTCATCAGCTTTATAAGCAAACAAGGCAATTTATCATCTCAAGTTCCCCTTAAGAG ACTTCTGAACACCTGGACAAACAGATATCCAGATGCTAAAATGGACCCAATGAACATCTGGGATGACATCATCAC AAATCGATGTTTCTTCTCAGCAAAATAGAGGAGAAGCTTACCCCTCTTCCAGAAGATAATAGTATGAATGTGGA TCAAGATGGAGACCCCAGTGACAGGATGGAAGTGCAAGAGCAGGAAGAAGATATCAGCTCCCTGATCAGGAGTTG CAAGTTTTCCATGAAAATGAAGATGATAGACAGTGCCCGGAAGCAGAACAATTTCTCACTTGCTATGAAACTACT GAAGGAGCTGCATAAAGAGTCAAAAACCAGAGACGATTGGCTGGTGAGCTGGGTGCAGAGCTACTGCCGCCTGAG CCACTGCCGGAGCCGGTCCCAGGGCTGCTCTGAGCAGGTGCTCACTGTGCTGAAAACAGTCTCTTTGTTGGATGA GAACAACGTGTCAAGCTACTTAAGCAAAAATATTCTGGCTTTCCGTGACCAGAACATTCTCTTGGGTACAACTTA GATTGATGCTTACATGACGCTGGCAGATTTCTGTGACCAACAGCTGCGCAAGGAGGAAGAATGCATCAGTTAT TGATTCTGCAGAACTGCAGGCGTATCCAGCACTTGTGGTGGAGAAAATGTTGAAAGCTTTAAAATTAAATTCCAA TGAAGCCAGATTGAAGTTTCCTAGATTACTTCAGATTATAGAACGGTATCCAGAGGAGACTTTGAGCCTCATGAC AAAAGAGATCTCTTCCGTTCCCTGCTGGCAGTTCATCAGCTGGATCAGCCACATGGTGGCCTTACTGGACAAAGA CCAAGCCGTTGCTGTTCAGCACTCTTGTGGAAGAAATCACTGATAACTACCCGCAGGCTATTGTTTATCCCTTCAT CATAAGCAGCGAAAGCTATTCCTTCAAGGATACTTCTACTGGTCATAAGAATAAGGAGTTTGTGGCAAGGATTAA AAGTAAGTTGGATCAAGGAGGAGTGATTCAAGATTTTATTAATGCCTTAGATCAGCTCTCTAATCCTGAACTGCT GACTTTTGGAAAAGAATTTGATAAACATTTTGGGAAAGGAGGTTCTAAACTACTGAGAATGAAGCTCAGTGACTT CAACGACATTACCAACATGCTACTTTTAAAAATGAACAAAGACTCAAAGCCCCCTGGGAATCTGAAAGAATGTTC

2764/6881 FIGURE 2543B

ACCCTGGATGAGCGACTTCAAAGTGGAGTTCCTGAGAAATGAGCTGGAGATTCCCGGTCAGTATGACGGTAGGGG AAAGCCATTGCCAGAGTACCACGTGCGAATCGCCGGGTTTGATGAGCGGGTGACAGTCATGGCGTCTCTGCGAAG GCCCAAGCGCATCATCCTGGCCATGACGAGAGGGAACACCCTTTCCTGGTGAAGGGTGGCGAGGACCTGCG GCAGGACCAGCGCGTGGAGCAGCTCTTCCAGGTCATGAATGGGATCCTGGCCCAAGACTCCGCCTGCAGCCAGAG GGCCCTGCAGCTGAGGACCTATAGCGTTGTGCCCATGACCTCCAGGTTAGGATTAATTGAGTGGCTTGAAAATAC TGTTACCTTGAAGGACCTTCTTTTGAACACCATGTCCCAAGAGGAGAAGGCGGCTTACCTGAGTGATCCCAGGGC ACCGCCGTGTGAATATAAAGATTGGCTGACAAAAATGTCAGGAAAACATGATGTTGGAGCTTACATGCTAATGTA TAAGGGCGCTAATCGTACTGAAACAGTCACGTCTTTTAGAAAACGAGAAAGTAAAGTGCCTGCTGATCTCTTAAA ${\tt GCGGGCCTTCGTGAGGATGAGTACAAGCCCTGAGGCTTTCCTGGCGCTCCGCTCCCACTTCGCCAGCTCTCACGC}$ TCTGATATGCATCAGCCACTGGATCCTCGGGATTGGAGACAGCATCTGAACAACTTTATGGTGGCCATGGAGAC TGGCGGCGTGATCGGGATCGACTTTGGGCATGCGTTTGGATCCGCTACACAGTTTCTGCCAGTCCCTGAGTTGAT GGTACACGCACTCCGGGCCTTCCGCTCAGACCCTGGCCTGCTCACCAACACCATGGATGTTTTGTCAAGGAGCC TGAAAAAATTGGTACCCCCGACAGAAAATATGTTACGCTAAGAGAAAGTTAGCAGGTGCCAATCCAGCAGTCAT TACTTGTGATGAGCTACTCCTGGGTCATGAGAAGGCCCCTGCCTTCAAAGACTATGTGGCTGTGGCACGAGGAAG CAAAGATCACAACATTCGTGCCCAAGAACCAGAGAGTGGGCTTTCAGAAGAGACTCAAGTGAAGTGCCTGATGGA CCAGGCAACAGACCCCAACATCCTTGGCAGAACCTGGGAAGGATGGGAGCCCTGGATGTGA

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LISYPQEVIPTFDMAVNEIFFDRYPDSILEHQIQVRPFNALKTKNMRNLNPEDIDQLITISGMVIRTSQLIPEMQ
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ELSRKPDIYERLASALAPSIYEHEDIKKGILLQLFGGTRKDFSHTGRGKFRAEINILLCGDPGTSKSQLLQYVYN
LVPRGQYTSGKGSSAVGLTAYVMKDPETRQLVLQTGALVLSDNGICCIDEFDKMNESTRSVLHEVMEQQTLSIAK
AGIICQLNARTSVLAAANPIESQWNPKKTTIENIQLPHTLLSRFDLIFLLDPQDEAYDRRLAHHLVALYYQSEE
QAEEELLDMAVLKDYIAYAHSTIMPRLSEEASQALIEAYVDMRKIGSSRGMVSAYPRQLESLIRLAEAHAKVRLS
NKVEAIDVEEAKRLHREALKQSATDPRTGIVDISILTTGMSATSRKRKEELAEALKKLILSKGKTPALKYQQLFE
DIRGQSDIAITKDMFEEALRALADDDFLTVTGKTVRLL

CTTGAAGAAGACAAAAAGGAGTAGGCGACGGTACAGTTAGCTGGGGCCTTGAAGATGATGAAGATATGACACTT ACAAGGTGGACAGGCATGATTATTGGGCCACCAAGGACAAATTATGAAAACAGAATATATAGCCTGAAAGTAGAA TCCAGTGGGATGGTGGATGCCCGGAGCATACCAGTGTTAGCAAAATGGCAAAATTCATATAGCATTAAAGTTGTA CTTCAAGAGCTAAGACGTCTAATGATGTCCAAAGAAAATATGAAGCTTCCACAGCCACCAGAAGGACAAACATAC AACAATTAATTTTAGTGGATCTCAAACTTGTCTTAAATCAACACCTTCTACTCATGTTAATGTCTTGATTAAAT ATCACAATGCAAAATACACATTAAGTAAAAGAATTCCAGCTGGTAAACATGACCTGGACATTTGTAAGAATATAT CACTGTCATTTAAACATAAACCTGGAGTACTCGAAATAGAATTCAGGTTTACAAGATGAAAGCGTGTGGAGAAGT GTCAGATGGCAGTGGAAGCATGTGTGTTTCTAAAAAGTAAAAATCTCAAGAAAACAGAAATGGCATGCTTTACCC ATCTTACTTAGTGAAAGAGAGCTGCAGTTGAAATTGTTTAAAAAGTAGCAGGTACAATGAATATTGTCACAGATG TGTTAATTTTTGAAGCAATGTGGGTGCTGACTACTAGTAGTATCAAAAATATGTTCAGGATTGTTTTGATACCTG TATTTATAATAAAAAATGTTGGGGGGAGTTGATGAATTCCTGTTAAAAGCTGTTCTTGTGTGTTACATGTAACAG ACATGGTAAATATTTGTTTACAGTCTTTGTTTAACAAACCATGCATTTAAGTTTAAGTGAAGTCAACAAAAAGGA GAGACTGTGCCATTTCTATTATGTTGATGTATATGTACAGTACCTTGCCAGGGAAGCAAAAATTGGAATTATTGT AGCTTTTCATGTATACACACTTTTATTTACCCTATTTTGTGTACTTCTTGTGAATTATAATTTGCAGACTATTTC AGAAAAGAAATTATCTAGTTTAATTTCTTCTTTGGACAAGGAGTCCTAGGTATTATATTTTTGAGTTTGATTTCAC CAGAAATAATAATAATAAAAAGATCTTTGCATTCTGGCAGTTCTTTTAGGATTATAGGTTGCAAATTATCCAAAT ATATATCCCATTTTTTAAAGCATAAAAAAAAAAAAA

 ${\tt MAVSTGVKVPRNFRLLEELEEGQKGVGDGTVSWGLEDDEDMTLTRWTGMIIGPPRTNYENRIYSLKVECGPKYPE} \\ {\tt APPSVRFVTKINMNGINNSSGMVDARSIPVLAKWQNSYSIKVVLQELRRLMMSKENMKLPQPPEGQTYNN} \\ {\tt CONTROL OF C$

AGATGGGCCATCAACTGAGAAAGACCTTGACGAAAAGAAGAAGAACCTGCAATTACATCGCAGAACAGCCCTGA GGCAAGAGAAAAGTACTTCCAGCGGCAATGTAAGCAACAGAAAGGATGAGACAAATGCTCGAGATACTTATGT $\tt TTCATCCTTTCCTCGGGCACCAAGCACTTCTGATTCTGTGCGGTTGAAGTGTAGGGAGA\underline{ATG}CTTGCTGCAGCTCT$ TCGAACAGGGGATGACTACATTGCAATTGGAGCTGATGAGGAAGAATTAGGATCTCAAATTGAAGAAGATATATA TCAAGAAATAAGGAATACAGACATGAAATACAAAAATAGAGTACGAAGTAGGATATCAAATCTTAAAGATGCAAA AAATCCAAATTTAAGGAAAAATGTCCTCTGTGGGAATATTCCTCCTGACTTATTTGCTAGAATGACAGCAGAGGA AATGGCTAGTGATGAGCTGAAAGAGATGCGGAAAAACTTGACCAAAGAAGCCATCAGAGAGCATCAGATGGCCAA GACTGGTGGGACCCAGACTGACTTGTTCACATGTGGCAAATGTAAAAAGAAGAATTGCACTTACACACAGGTACA AGTTGGAAGAATTGGCAAAATATCTGGACCATTAAGAAAACGGATTTTGTAACTAGCTTTAAACTAGGCCAAGCA AATGCCTTCTGTAGTTTCAGATCAGTAGGGAGACCATATAATAATTTTTATGGTACCTGTTTCAAAACATATTTTT AACTTTTTTTCTTTTACACTGTGAAACATACACAGTAGAAATTCTGTTACTCTGTTATTAATACATAAATGAA AATACATTTTTTTCCATATTGGCATGTAGCTACAAATATTAAAGGAGGAGAAAAGGTAATATAATTTTAGGTTTA CCAAATATGGTGTGTATTCAAATAATACTTGACCAGCTTATCTAAAATGTACATAATTTTGAGGTAGCTTATGAA ATTTCTTGTAATTTCTTGTACATGTATATTACTTGTTCTTAATAGATTTTTTGGAAACAAGACTTTATTGAGATCA GTTTGGTTTTCCTGTTAATTTACCTGTTTGACTTTATAATGTGTTTTAGTTTTGCAGAAGAACACTGTTGTAGTT TAGAAGGCTTTTCATAAATCCCCTCATAGGCAAAGATGAAAACTTCCCACTATTTTTTTCCCCTCTTAGGAAGAC ATACTGGAAAGAAATGTTTAGCATCTTAGTGTAGTATAGCTATTGTAAACAGTTCATGACTAGATTTTGATTCG GAAATCTATACTGACCAAGGATTAATCTTAAGGATTGTATAATTCATTAAAGCTGTGGTCTTTCCATGTGGAGAC ATATATGGGCTATAGCAAGTAGCTTTACAGTACAGATCTTACAATTAAGTTTTGCTTTTGTTAAAGTGTGTACCA TTTTTTCTGTTTGGAGTAAGACAAAAATTGTTTTGACATAGGTTCCCTAGGGTACACTTGCTCTAGCATACTTTA AAGGCCACTGTTGCAAAGTCTACATTTTATGCTGAATCTGCATTCTGTCAGGCACCCGTAGAAAGACCTCAGTAC ATGCTTTGCACTCTCCTTTTGCTCCCTTTTTCCAATTTCTTATTGCATATCATTTTGTTGTAATACAGAAAGCAGC ATTTTTAAATGTCCGTGTTAAGAATTGGCCCACTGGTACCAACTCACCTCTATTTTGTCAGTTCATAGTTGAAGA TTTTGTTTTATTTCAAAAACAAAGTACATTTTTGAAATAATGTTTCAGAATAAAATAATCTCACTTTTAAGTGAT

FIGURE 2549

 ${\tt MLAAALRTGDDYIAIGADEEELGSQIEEDIYQEIRNTDMKYKNRVRSRISNLKDAKNPNLRKNVLCGNIPPDLFARMTAEEMASDELKEMRKNLTKEAIREHQMAKTGGTQTDLFTCGKCKKKNCTYTQVQTRSADEPMTTFVVCNECGNRWKFC$

FIGURE 2550

CGCGCACGCCTGAGCGTGCGCCCGGTGGGGCCGGCCCGGACTCGCCACGCCCTTGGGCCGCGGCCGG GCGCCCGCTCTTCCTTCCGCTTGCGCTGTGAGCTGAGGCGGTGTATCTCGCGCAATAACATGTCAACCCCGCTGC GATGGGCAGAAGCCTTTGCAGGTATCAGAAGTTCACATATCAAATATATCTGCCCGCATGCGCCTGTTAGGCCTG TTACATTAAATATGAACGTGGCTATGCCTTCATGGTTTGATATTATTGGGCTTTCACCAGATTCACAGGAGGATG TGGCAGGTGTCACTGCACTCAGTTGCTGGCTTCCACTTCGGGCTTCCTTTCCACAGGGTCCTATCGGTGGTGCTA ATAGAGATATTTCTATTCTCCAGTGCCACGGGGATTGTGACCCTTTGGTTCCCCTGATGTTTGGTTCTCTTACGG TGGAAAAACTAAAAACATTGGTGAATCCAGCCAATGTGACCTTTAAAACCTATGAAGGTATGATGCACAGTTCGT GTCAACAGGAAATGATGGATGTCAAGCAATTCATTGATAAACTCCTACCTCCAATTGAT<u>TGA</u>CGTCACTAAGAGG CCTTGTGTAGAAGTACACCAGCATCATTGTAGTAGAGTGTAAACCTTTTCCCATGCCCAGTCTTCAAATTTCTAA TGTTTTGCAGTGTTAAAATGTTTTGCAAATACATGCCAATAACACAGATCAAATAATATCTCCTCATGAGAAATT TATGATCTTTTAAGTTTCTATACATGTATTCTTATAAGACGACCCAGGATCTACTATATTAGAATAGATGAAGCA GGTAGCTTCTTTTTCTCAAATGTAATTCAGCAAAATAATACAGTACTGCCACCAGATTTTTTATTACATCATTT GAAAATTAGCAGTATGCTTAATGAAAATTTGTTCAGGTATAAATGAGCAGTTAAGATATAAACAATTTATGCATG CTGTGACTTAGTCTATGGATTTATTCCAAAATTGCTTAGTCACCATGCAGTGTCTGTATTTTTATATATGTGTTC ATATATACATAATGATTATAATACATAATAAGAATGAGGTGGTATTACATTATTCCTAATAATAGGGATAATGCT GTTTATTGTCAAGAAAAGTAAAATCGTTCTCTTCAATTAATGGCCCTTTTATTTTGGGACCAGGCTTTTATTTT CATAGCAGGCCAAGTATTGCCTCTCTGCAATAGACAGCTACTGTCAATACATGCTGTAATTTGACATTCTGGGTC ACAGATATAAGGTATTTAAAATCTATTTATGCTTTATAGAGAAACCAGACATTAAAACTTCATGCACTACTTATT TCGAATTACTGTACCTTATCCAAATTTACACCTAGCTATTAGGATCTTCAACCCAGGTAACAGGAATAATTCTGT GGTTTCATTTTTCTGTAAACAACTGAAAGAATAATTAGATCATATTCTAGTATGTTCTGAAATATCTTTAAGACT GATCTTAAAAACTAACTTCTAAGATGATTTCATCTTCTCATAGTATAGAGTTTACTTTGTACACGTTTGAAACCA ACTACTGTAGAAGATGAGGAATCTATTGTAATTTTTTGCTTTATTTTCATCTGCCAGTGGACTTATTTGAAATTT TCACTTTAGTCAAATTATTTTTTGTATTAGTTTTTGATGCAGACATAAAAATAGCAATCATTTTAAATTGTCAAA ATTTCCAGATTACTGGTAAAAATTATTTGAAAACAAACTTATGGGTAATAAAGGCTAGTCAGAACCCTATACCAT ${\tt AAAGTGTAGTTACCATACAGATTAATATGTAGCAAAAATGTATGCTTGATATTTCTCAACTGTGTTAATTTTCTCT}$ GCTGTATTCCAGCTGACCAAAACAATATTAAGAATGCATCTTTATAAATGGGTGCTAATTGATAATGGAAATAAT TTAGTAATGGACTATACAGGATGTTAATAATGAAGCCATATGTTTATGTCTGGATTTAAAAATTTTAAACAATCA TTTACTATGTCATTTTTCTTTACCTTGAAGAACATAAACTGTTATTTCACTTCTACAAATCAGCAAGATATTATT TATGGCAAGAATATTCCATTGAAATATTGTGCTGTAACATGGGAAAGTGTAAATGTTTTTCATGGTTTCTATCA ATGTGAAATAAAATTTAATTCTGAAAAA

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ACCAAGGCTAAAAGACGAAATACCACCAGAACTGGTCAAATGAGGCACCTAAAAATTGTATACCATAGATTCAGG
CATGGATTCCGTGAAGGAACAACACCCTAAACCCAAGAGGGCAGCTGTTGCAGCATCCAGTTCATCT<u>TAA</u>

 ${\tt MMKGTSSFGKHCNKTYTLCHHCGSKAYHLQKSTYGKCGYTAKRKRKYNWSTKAKRRNTTRTGQMRHLKIVYHRFR\\ HGFREGTTPKPKRAAVAASSSS}$

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TCCTAAAACACCAAAAGGACCTAGTTCTGTAAAAAGACAT

TGCTGCCTCCCGATGGAAGATCTGATGGACGTGGACATGAGCTCCCTGAGGCCCCAGAACTATCTTTTTGGTTGT GAACTAAAGGCTGACAAAGATTGTCACTTTAAGGTGGATAATGATGAAAATGAGCGCCAGTTGTCTTTAAGAACG GTCAGTTTAGGGGCTGGTGCAAAGGATGAATTGCACATTGTTGAAGCAGAGGCAATGAATTACGAAGGCAGCCCA ATTAAAGTAACACTGGCAACTTTGAAAATGTCTGTACAGCCAACGGTTTCCCTTGGGGGGCTTTGAAACAACACCA CCAGTAGTCTTAAGGTTGAAGTGTGGTTCAGGGCCAGTGCATATTAGTGGACAGCACTTAGTAGCTGTGGAGGAA GATGCAGAGTCAGAAGATGAAGAGGAGGAGGATGTGAAACTCTTAAGTATATCTGGAAAGCGATCTGCCCTCGGA GGTAGTAGCAAGCTTCCACAGAAAAAAGTAAAACTTGCTGCTGATGAAGATGATGATGATGATGAAGAAGATGAT GATGATGAAGATGATGATGATTTTAATGATGAGGAAGCTGAAGAAAAAGTGCCAGTGAAGCAATCTATACAA GATACTCCAGCCAAAAATGCACAAAAGTCAAAATCAGAATGGAAAAGACTCAAAACCATCAACACCAAGATCAAAA GGACAAGAATCTTTCAAAAAACAGGAAAAAAACTCCTAAAACACCAAAAGGACCTAGTTCTGTAAAAGACATTAA AGCAAAAATGCAAGCAAGTATAGAAAAAGGTGGTTCTCTCCCAAAGTGGAAGCCAAGTTCATCAATTACGTGAA GAATTGCTTCCGGATGACCAAGAGGCTATTCAAGATCTCTGGCAGTGGAGGAAGTCTCTTTAAGAAAATAG TTTAAACAATTTGTTAAAAATTTTCCGTCTTATTTCATTTCTGTAACAGTTGATATCTGGCTGTCCTTTTTATAA TGCAGAGTGAGAACTTTCCCTACCGTGTTTGATAAATGTTGTCCAGGTTCTATTGCCAAGAATGTGTTGTCCAAA CACAGTAGTAGCGGTGGTCAGACATGGAAATCGTGGGGAGACAAAAATATACCTGTGAAATAAAACTCAGTATTT TAAT

CAGAAGTCCTACAAGGTGTCCACCTCTGGCCCCCGGGCCTTCAGCAGCCGCTCCTACACGAGTGGGCCCGGTGCC CACATCAGCTCCTCGAGCTTCTCCTGAGTGGGCAGCAGCAGCTTTCGGGGTGGCCTGGGAGGCGGCTATAGTGGG GCCAGCGGCATGGGAGGCATCACCGCAGTCATGGTCAACCAGAGCCTACTGAGCCCCCTTGTCCTGGAGGTGGAC CCCAACATCCAGGCTGTGTGCACCCAGGAGAAGGAGCAGATCAAGACCCTCAACAACAAGTTTGCCTCCTTCACA GACAAGGTACGGTTCCTGGAGCAGCAGAACAAGATGCTGGAGACCAAGTGGAGCCTCCTGCAGCAGCAGAAGATG GCTCGGAGCAACATGACATGTTCGAGAGCTACATCAACAACCTTAGGCGGCAGCTGGAGACTCTGGGCCAG GAGAAGCTGAAGCTGGAGGCGGAGCTTGGCAACATGCAGAGGCTGGTGGAGGACTTCAAGAACAAGTATGAGGAT GAGATCAATAAGCATACAGAGATGGAGAATGAATTTGTCCTCATCAAGAAGGATGTGGATGAAGCTTACATGAAC AAGGTAGAGCTGGAGTCTCGCCTGGAAGGGCTGACTGACGAGATCAACTTCCTCAGGCAGCTGTACGAAAAGGAG ATCCGGGAGCTGCAGTCCCAGATCTCGGACACATCTGTGGTGCTGTCCATGGACAACAGCCGCTCCCTGGACATG TACCAGATCAAGTATGAGGAGCTGCAGAGTCTGGCTGGGAAGCACGGGGATGACCTGTGGCGCACAAAGACTGAG ATCTCTGAGATGAACTGGAACATCAGCCAGCTCCAGGCTGAGATTGAGGCCTCAAAGGCCAGAGGGCTTCCCTG GAGGCCGCCATTGCAGATGCCGAGCAGCGTGGAGAGCTGGCCATTAAGGATGCCAACGCCAAGTTGTCCGAGCTG GAGGCTGCCCTGCAGCGGGCCAAGCAGGACATGGCACGGCAGCTGCGTGAGTACCAGGAGCTGATGAACGTCAAG CTGGCCCTGGACATCGAGATCGCCACCTACAGGAAGCTGCTGGAGGGCAAAGAGAGCCGGCTGAAGTCTGGGATG CAGAACATGAGTATTCATACGAAGACCACCAGCGGCTATGCAGGTGGTCTGAGCTCGGCCTATGGGGGCCTCACA AGCCCCGGCCTCAGCTACGGCCTCGGGCTCCAGCTTTGGCTCTGGCGCAGGCTCCAGCTCCCTCAGCCGCACCAGT TCCTCCAGGGCCGTGGTTGTGAAGAAGATCGAGACATGTGATGGGAAGCTGGTGTCCCGAGTCCTCTGACATCCTG $\tt CCCAAGTGAACAGCTGTGGCAGCCCTCCCAGCCTACCCTCCTGCGCTGCCCCAGAGCCTGAGAAGGAGGCCAC$ ${\tt TATTCAGGGTAGCACTGGGAACAGGAGACCCACCTGAGGCTCAGCCCTCAGCCCACCTGGGGAGTTTAC}$ CTCAGCTAGCTCTGCCAA

CAGTGGCCAGCAGCAGCTTTCGGGGTGGCCTGGGAGGCGGCTATAGTGGGGCCCAGCGGCATGGAGGCATCACCG
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TGCTGCCTACAGCGTCTGCTCCACCCCTGCTGCCCGCTGGAGCCCTAGTGGCTCCCTCGCTTGGCAACAACACAA GTCTCATGGCCGCAGCAGCTGCAGCTGCAGCAGTGGCAGCAGCAGCAGCCTCCAGTCCTCACTGCCCAGACCA ACCCCTTCCTCAGCCTGTCGGGAGCAGACGGCAGTGGCGGTGGCCCCAAAGGAGGGACCGCTGACAAAGGAGCCT CAGCCAACCAGGAAAAAGGCTAAATCCACCCTTACCCCTCTGACCCCCAAGTGGAGGGAACAGATCCTGGCCT GAGGGGTCCTAGCCTGGAGCAGGCGCCTGCGCCCAGACCCTGGAGAGCCTTGACCCAGAGCCTGTGCTGAGGTCC AGGGAGTGTGGAGAGCTCCTGGTGTCAAGGACTGAGAGGGGGAGCCCCCTCCATCTGGCCCCCTTCCCTT TCTGTACTGTCCGCTTTGTGAGGCTCAGAGGAAGGACAGTCTGCAAGCCCACCTAGGAGGTCCATCCCCAGCAAA TGGATCAGCACTTGAATGGGGAGAGTGGAGGGGAGAGGCCCTGGCCTGTCCCTGCGGGGAAATCTTTTATGGAA GAAGGGCTGGACCCACTTTACCTGCAGTTTCTTCCCAGCTCAGGCAGATGGCAGAAGGGACCCCTTGGACTTTTT CTCGCCATCCCTCCCCCAGCGCAGGGGCACAAGCTGAGCTTGTAAAAGCCCACAGATGTTGGGGGCTGGAGAAG GGGCAGGAGAGCATCACACTCAGCCCCAGCCTCCTCAACCTCTTGGGGCCCTGTGATGGGGAGGAGACGGCAGGT TGCCTGTCTCTCCTCCTGGACCCAGGGCAGCCAAGGGCAGGGATAGGTGCAGTGGTCAGATGAAGCAGTGCCA GAGAGGGGACCTCCCAGCTCTTATTTGCACCCTCCCCACCTCACCAACTTTGGTCCCTCTCTGGGGGCATGAATG GTTAACAAACACCAGAGCAGTACTCCAATATTGGAGAGTCACTGGGGGCACAGGGCTTTGAATCAGGGTAGTATC $\tt CTGCCTTCCCTGACCCCACATGGTCTCAGGGCCCCCTTAGGGCCCCCTACCCCACTGATAGCTTCCTCCT$ TCTCTGGCACAAGGGGAGCCCCAGGGCTTGGGGGGAGGGCGTAAGGTGGGGGGAAATGCCACAGCTTTTAGCAAAA ACAACTGTCCCCTCACCCACCAGCTATTTCCCCAGTGTAGAGTGGGCAATTCTCACCTTCAAAGAGTCCCCACCT GCCCAGGCCTTTGGCACAGAGGCTGAGTGGACAGTCAGGAGAGAGGCGAAGGCGAAGCCGATGTCCCTG TTTCAGTTGCACTGGGGTTGGAGCCCAGGGTAGGGGTTTCCAGCTTCCCCAGGCTCCGGCCTTGTCAGTCTCTTT AGAAGATGTGTATATTTTTGGCAACGAC

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ACAGTCTCTGAGAAGTACTTTACCTGAAAGACAGTATGAGAAAAATATTCAAGTAACACTTTAAAACCAGTTACC CAAAATCTGATTAGAAGTATAAGGTGCTCTGAAGTGTCCTAAATATTAATATCCTGTAATAAAGCTCTTTAAAAT GA

MAASGSGMAQKTWELANNMQEAQSIDEIYKYDKKQQQEILAANLGTKDHHYFKYCKISALALLKMVMHARSGGNL EVMGLMLGKVDGETMIIMDSFALPVEGTETRVNAQAAAYEYMAAYIENAKQVGRLENAIGWYHSHPGYGCWLSGI DVSTQMLNQQFQEPFVAVVIDPTRTISAGKVNLGAFRTYPKGYKPPDEGPSEYQTIPLNKIEDFGVHCKQYYALE VSYFKSSLDRKLLELLWNKYWVNTLSSSSLLTNADYTTGQVFDLSEKLEQSEAQLGRGSFMLGLETHDRKSEDKL AKATRDSCKTTIEAIHGLMSQVIKDKLFNQINIS

GGCACGAGGGGGAGCGGCGCGAGTCGGTGAGCAGCTGGGAAGAGCAGAACCGGGGCGGAGCACCTGCAGGCGC GGGCGGCGCCCCACCATGCGATTCGCAAGAAAAGCACCAAGAGCCCCCCAGTGCTGAGCCACGAATTCGTCCT GCAGAATCACGCGGACATCGTCTCCTGTGTGGCGATGGTCTTCCTGCTGGGGCTCATGTTTGAGATAACGGCAAA AGCTTCTATCATTTTTGTTACTCTTCAGTACAATGTCACCCTCCCAGCAACAGAAGAACAAGCTACTGAATCAGT ${\tt GTCCCTTTATTACTATGGCATCAAAGATTTGGCTACTGTTTTCTTCTACATGCTAGTGGCGATAATTATTCATGC}$ CGTAATTCAAGAGTATATGTTGGATAAAATTAACAGGCGAATGCACTTCTCCAAAACAAAACACAGCAAGTTTAA CATCTCAGACCCAACTATCTTATGGAGGGCTTATCCCCATAACCTGATGACATTTCAAATGAAGTTTTTCTACAT ATCACAGCTGGCTTACTGGCTTCATGCTTTTCCTGAACTCTACTTCCAGAAAACCAAAAAAGAAGATATTCCTCG TCAGCTTGTCTACATTGGTCTTTACCTCTTCCACATTGCTGGAGCTTACCTTTTGAACTTGAATCATCTAGGACT TGTTCTTCTGGTGCTACATTATTTTGTTGAATTTCTTTTCCACATTTCCCGCCTGTTTTATTTTAGCAATGAAAA GTATCAGAAAGGATTTTCTCTGTGGGCAGTTCTTTTTGTTTTGGGAAGACTTCTGACTTTAATTCTTTCAGTACT GACTGTTGGTTTTGGCCTTGCAAGAGCAGAAAATCAGAAGCTGGATTTCAGTACTGGAAACTTCAATGTGTTAGC TGTTAGAATCGCTGTTCTGGCATCCATTTGCGTTACTCAGGCATTTATGATGTGGAAGTTCATTAATTTTCAGCT TCGAAGGTGGAGGGAACATTCTGCTTTTCAGGCACCAGCTGTGAAGAAGAAACCAACAGTAACTAAAGGCAGATC TTCTAAAAAAGGAACAGAAAATGGTGTGAATGGAACATTAACTTCAAATGTAGCAGACTCTCCCCGGAATAAAAA AGAGAAATCTTCATAATGAATTATAAACTAATTGATTAATGTCCCCAAAGAAATCTGCTTTCTACTATATCTTTC AGCATTAGAGATTTTTCTGTTCTTGAAAATACAGTCTGTGCTCTTTGATTTTTGCTATTGTACGGTTTCATGCAT GAGAAAACTATTTACAAAAATTCCACATATCAGTGATACAATTTCTTGCTGTCACCAATTTTTTATAATAGCAGA GTGGCCTGTTCTAAGAAGGCCATATTTTTTAAGTTATCTTTCAGGGTAACATGGAAATACTATAAAGTTGGATGT CAAACTTTAATATGTTTTCAGTGTTCTCTAATTTTTTTGGAATTTTTTGTAGACTTTACACCTGGAAAAAAAGATTT GTAAAATCACCGGAACAATTGTGTGCTTTATTTTATAGGTAGTGGTTATTAGTATTACATCCCCATTTTAAAAAAC CTTGTGAAGTAAAATCTTTCTTGTGCATTTTCAATACTTGTAAACTGGAAATCAGAAAATATTTACTATGAACAG GAAAATCTGACATATAGCCCTTTTTGATATGTTTATTAATAATGATTCTTAATGGGGCTCATAATAAGTTTAATA TGCACAGCATCTTAGAAAAGTTTAACCTGCAAACACTTTTAAAACATAATGCCTACTTGATTTATATCTATAAAA AGACTGACAGGTAATTATATTTGGAAAACATTTAATGCACTAACTTTAAAGAAATTGAAAATTCAGGTGGATAAA TAGTCTTACAAAAGACAATGTGCTTTATGTTATACCTATAGCTTTGGTCCCATCTTTAATTGAGAAACATTTATC TGTATAAAACATATTTTTGGATAAATATATATATATATTTTGTATCGCTACAGAAAGGCTCTAAAAAGCATTTG AGGAAAATATTTGGTTCCCTTTTCTATAATCATCCTTTAAGATTCTTATAGCTACATTTGGTTTATTCATCATAT TTACAGTATATATTGTTCTTTTCAGTGTTCACATCTTGTTCCCCATTTCTCACTTGTGTCACCAGCTGTTTGT GCCATTTTTAGTGTAAAAGTTGCAGACCTATTAGATCTGCAGTTTAAGTTGCCATGCTGCTAGGAAATTGTCCTT TTTCTTTCTAGCTGTTAACCTACTTCCTGGAAAAAGTAGTAGCTCTCTGTAGCATTATGGAGTTTCAGTGGAACC ТСАСАААААААААААААА

MAIRKKSTKSPPVLSHEFVLQNHADIVSCVAMVFLLGLMFEITAKASIIFVTLQYNVTLPATEEQATESVSLYYY GIKDLATVFFYMLVAIIIHAVIQEYMLDKINRRMHFSKTKHSKFNESGQLSAFYLFACVWGTFILISENYISDPT ILWRAYPHNLMTFQMKFFYISQLAYWLHAFPELYFQKTKKEDIPRQLVYIGLYLFHIAGAYLLNLNHLGLVLLVL HYFVEFLFHISRLFYFSNEKYQKGFSLWAVLFVLGRLLTLILSVLTVGFGLARAENQKLDFSTGNFNVLAVRIAV LASICVTQAFMMWKFINFQLRRWREHSAFQAPAVKKKPTVTKGRSSKKGTENGVNGTLTSNVADSPRNKKEKSS

MEGVEEKKKEVPAVPETLKKKRRNFAELKIKRLRKKFAQKMLRKARRKLIYEKAKHYHKEYRQMYRTEIRMARMA RKAGNFYVPAEPKLAFVIRIRGINGVSPKVRKVLQLLRLRQIFNGTFVKLNKASINMLRIVEPYIAWGYPNLKSV NELIYKRGYGKINKKRIALTDNALIARSLGKYGIICMEDLIHEIYTVGKRFKEANNFLWPFKLSSPRGGMKKKTT HFVEGGDAGNREDQINRLIRRMN

AACACTGCTCGACATGGAAACCAGTGTGATTGAAGGTGGATTAAATATCACTCTCACCATCCGACTACTTATGCA TGGAAAGGAAGTTGGCAGTATCATCGGAAAGAAAGGAGAATCAGTTAAGAAGATGCGCGAGGAGAGTGGTGCACC TATCAACATCTCAGAAGGGAATTGTCCTGAGAGAATTATCACTTTTGCTGGACCTGCTAATGCCGTCTTCAAAGG CTTTGCTATGATCATTGACAAACTGGAAGAGGACATAAGCAGCTCTATGACCAGTAGCACAGCTGCCAGTAGACC $\verb|CCCAGTCACCCTGAGGCTGGTGGTCCCTGCTAGTCAGTGGGCTCTCTCATTGGAAAAGGTGGTTGCAAGATCAA|$ GGAAATACGAGAGAGTACAGGGGCTCAGGTCTAGATGGCAGGGGATATGCTACCCAACTCAACTGAGCAGGCCAT GAAGGGCGTGACCATCCCGTACCAGCTCAAGCCTTCCAGCTCTCCGGTCATCTTTGCAGGCGGTCAGGCCTATAC CCTTCAAGGACAGTTTGCCATTCCACAGCCAGATTTGACCATGCTGCACCAGTTGGCAATGCAACAGTCTCATTT TCCCATGACGCATGGCAACACTGGATTCAGTGCAGGTTTGGATACATCTGCTCAGACTACTTCTCATGAACTTAC GGCACAGATCAAAATTGCGAACCCAGTGGAAGGATCTACTGATAGGCAGGTTACCATCACTGGATCTGCTGCCAG CATTAGCCTGGCTCAATATCTAATCAATGTCAGGCTTTCCTCGGAGACGGGTGGCATGGGGAGCAGCTAGAACAA TGCAGATTTATCCACAATCCCTTTCTGCTGTTCACCACCACCCATGATCCATCTGTAGTTTCTGAACAGTCAG CGATTTCAGGTTTTAAATAGTTTGTAAATTTTCAGTTTCTACACACTTTATCATCCACTCGTGATTTTTTACTTA AAGTGTTTTAATTCCTTT

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2793/6881 FIGURE 2572

 ${\tt MKLQNQRGGRIFLQDIKKPDCDDWESGLNAMECALYLEKNVNQSLLELYKLATDKNDPHLCDFIETHYLNEQVKAIKELSDHVTNLRKMGAPESGSAEYLFDKHTLGDSDNES}$

MATVQQLEGRWRLVDSKGFDEYMKELGVGIALRKMGAMAKPDCIITCDGKNLTIKTESTLKTTQFSCTLGEKFEE TTADGRKTQTVCNFTDGALVQHQEWDGKESTITRKLKDGKLVVECVMNNVTCTRIYEKVE

MSGALDVLQMKEEDVLKFLAAGTHLGGTNLDFQMEQYIYKRKSDGIYIINLKRTWEKLLLAARAIVAIENPADVS VISSRNTGQRAVLKFAAATGATPIAGCFTPGTFTNQIQAAFQEPRLLVVTDPRADHQPFTEASYVNLPTIALCNT DSPLRYVHIAIPCNNKGAHSVGLMWWMLAWEVLCMRGTISREHPWEVMPDFCFYRDPEEIEKEEQPAAEKAVTKE EFQGERTAPAPEFTATQPEVADWSEGVQVPSVPIQQFPTEDCSAQPATEDWSAAPTAQATEWVGATTEWS

AAGATTCTCAAAGACCAGGTGCCCACTTAACTGTGAAAAAGATATTTGTTGGTGGCATTAAAGAAGACACTGAAG AACATCACCTAAGAGATTATTTTGAACAGTATGGAAAAATTGAAGTGATTGAAATCATGAGTGACCGAGGCAGTG GCAAGAAAAGGGGCTTTGCCTTTGTAACCTTTGACGACCATGACTCCGTGGATAAGATTGTCATTCAGAAATACC ATACTGTGAATGGCCACAACTGTGAAGTTACAAAAGCCCTGTCAAAGCAAGAGATGGCTAGTGCTTCATCCAGCC AAAGAGGTCGAAGTGGTTCTGGAAACTTTGGTGGTGGTCGTGGAGGTGGTTTCAGTGGGAACGACAACTTTGGTC ATGGAGGAAACTTCAGTGGTCATGGTGGCTTTGGTGGCAGCCATGGTGGTGGTGGATATGGTGGCAATGGGGATG GCTATAATGGATTTGGTAATGATGGAAGCAATTTTGGAGGTGGTGGAAGCTACAAGGATTTTGGCAATTACAACA ATCAGTCTTCAAATTTTGGACCCATGAAGGGAGGAAATTTTGGAGGCAGAAGCTCTGGCCCCCATGGTGGTGGAG GCCAGTACTTTGCAAAACCACGAAACCAAGGTGGCTATGGCGGTTCCAGCAGCAGCAGTAGCTATGGCAGTGGCA GAAGATTT<u>TAA</u>TTAGGAAACAAAGCTCAGCAGGAGAGGAGGAGCCAGAGAAGTAACAGGGAAGCTACAGGTTACAA CAGATTTGTGAACTCAGCCAAGCACAGTGGTGGCAGGGCCTAGCTGCTACAAAGAAGACATGTTTTAGACAAATA CTCATGTGTATGGGCAAAAAACTCGAGGACTGTATTTGTGACTAATTGTATAACAGGTTATTTTAGTTTCTGTTC GCCATCTTGGTAAATTTCCCCAACAGTGTGAAGTTAGAATTCCTTCAGGGTGATGCCAGGTTCTATTTGGAATTT ATATACAACCTGCTTGGGTGAAGAAGCCATTGTCTTCGGAAACCTTGGTGTAGTTGAACTGATAGTTACTGTTGT GACCTGAAGTTCACCATTAAAAGGGATTATCCAAGCAAAATCATGGAATTATTGGTTATAAAAGTGATTGTTGGT ACATCCTATGCAATATATCTAAATTGAATAATGGTACCAGATAAAATTATAGATGGGAATGAAGCTTGTGTATCA TCCATTATCGTATGTAATCAATAAACGATTTAATTCTCTTGAA

MNARPHKVDGRVVEPKRAVSREDSQRPGAHLTVKKIFVGGIKEDTEEHHLRDYFEQYGKIEVIEIMSDRGSGKKR GFAFVTFDDHDSVDKIVIQKYHTVNGHNCEVTKALSKQEMASASSSQRGRSGSGNFGGGRGGGFSGNDNFGHGGN FSGHGGFGGSHGGGGYGGNGDGYNGFGNDGSNFGGGGSYKDFGNYNNQSSNFGPMKGGNFGGRSSGPHGGGGQYF AKPRNQGGYGGSSSSSSYGSGRRF

AAAGATATTTGTTGGTGGCATTAAAGAAGACACTGAAGAACATCACCTAAGAGATTATTTTGAACAGTATGGAAA
AATTGAAGTGATTGAAATCATGAGTGACCGAGGCAGTGGCAAGAAAAGGGGCTTTGCCTTTGTAACCTTTGACGA
CCATGACTCCGTGGATAAGATTGTCATTCAGAAATACCATACTGTGAATGGCCACAACTGTGAAGTTACAAAAGC
CCTGTCAAAGCAAGAGATGGCTAGTGCTTCATCCAGCCAAAGAGGTCGAAGTGGTTCTGGAAACTTTGGTGGTGG
TCGTGGAGGTGGTTTCAGTGGGAACGACAACTTTGGTCATGGAGGAAACTTCAGTGGTCATGGTGGCTTTGGTG
CAGCCATGGTGGTGGTGGATATGGTGGCAATGGGGATGCTATAATGGATTTTGGTAATGATGGAAGCAATTTTGG
AGGTGGTGGAAGCTACAAGGATTTTGGCAATTACAACAATCAGTCTTCAAATTTTGGACCCATGAAGGGAGGAAA
TTTTGGAAGGCAGAAGCTCTGGCCCCCATGGTGGTGGTGGAGGCCAGTACTTTGCAAAGCAGAAGATTTTAATTAGG

CCGTCGGGGCTATTAGTGAAAG<u>ATG</u>GTGGATCGCTTGGCAAACAGTGAAGCAAATACTAGACGTATAAGTATAGT GGAAAACTGTTTTGGAGCAGCTGGTCAACCTTTAACTATACCTGGACGAGTTCTTATTGGAGAAGGAGTATTGAC TAAGTTGTGCAGGAAAAAGCCCAAAGCAAGGCAGTTTTTCTTGTTTAATGATATTCTTGTATATAGGCAATATTGT CATCCAGAAGAAAAATATAACAAACAATATTATTCCCCTGGAAAATGTCACTATTGATTCCATCAAAGATGA GGGAGACTTAAGGAATGGATGGCTAATCAAGACACCAACTAAATCTTTTGCAGTTTATGCTGCCACTGCTACGGA GAAATCAGAATGGATGAATCATATAAATAAATGTGTTACTGATTTACTCTCCAAAAGTGGGAAGACACCCAGTAA TGTTAATCGTCGCCACCATTGCCGCAAATGTGGTTTTGTTGTCTGTGGGCCCTGCTCTGAAAAGAGATTTCTTCT TCCCAGCCAGTCCTCTAAGCCTGTGCGGATTTGTGACTTCTGCTATGACCTGCTTTCTGCTGGGGACATGGCCAC ATGCCAGCCTGCTAGATCAGACTCTTACAGCCAGTCATTGAAGTCTCCTTTAAATGATATGTCTGATGATGATGA CGATGATGATAGCAGTGACTAAGGACACATTTGGGAGTATTTAATCAGGTGTGGCTATCTGAGAAATCAACTTTG GGGGAAATGTAAGATTCTGAGCTCTCTCTCTGTTTTGTTCTAGCCATGAATTTGCCTGAGAAACTTGTAACCTAT GTGCCTCAATATATTCCATAGAAAGTAGGTCCCCCTGCCTTCTCCCACTCCTCACACTCTTCTACAGGGATAGGC TTTTGCAAATATATCAGATAAATTTTTTGTTTCTTGTTTATTTTTTAGGTTATTTTCTTGGAAGGTTGGGAAAAGA TGTTTGTTTTAACAGGTCATGTACTACGTTGTTGTTTTCATTTCTGTTATAAGTAAAACTAAAAGCACAGAATGG TGGGAAAGGGGCTATAATGTGGTTCATTAATAATGTTAGCAGCTTTTTTCTAACCATCCTGTCTAATGGTTAAGA CACCAGTAACAAAACACATGATTTGGAAATACTTTGGCTTTTTCATATACCTAGTGGTGCCTTATCATAATAGC ACTGTTACATGAAATAAGCCCCTACCTTCTTACTTTCTGGTTTGTTGAAAAAATACACTGGTGCTCTTTGAAGTG **ATAAAATGAGTGTTTATGAATGGGTGTAATTAGGAAATACTTCTCATCTGACAGCTACAAATAACTAAGTTTGGA** GGTATTTTCACTCTATATGAATAAATATTTTTCCATAAAATAGTTGTGATTATATTTTTTGTTTTATATAGGTCCC **AAATTATAATTGTCAAATATATATTTTAAATTAATAAAAGTTGTCATTCTTAGGAATTTGGTTTGAAATTTATCA** GTTATACAGAATTGTCATACTGCATTAGCTTCTACCTTTAGTAAGACATATTTTTTAGGTATAAATTCTTATGCT TTAACATTATTTCTGGATTGAAAATCTTATAAAACCCTTGAAAATAAACAGTCTCTTTTTTACAAAGCCTGTGTT AGAGCACAGATTTACCTAGGCTTGAAGATTTGGAAGAATAATATGTAAGAATGGCCTCAAGGCAGACCACTTTA AGTTTGGCTAGACTTCATATCGTGGAAGTATTGTCTATTTCAGTGTGAAACTATCTTGAATTTTGCAAATATAGTG TTTGAAATCATTTTGCAATCTATGGAAATAGAGTAGCAATTGCTATTTCTAAATTGTGAACTTTAAGTCAATCTA GATTTATTTTGAGAAGTAATTGTTCACTCTTTACTTTTGAGGCAGCCATTAGGTTGAAAGTATATTTATCATA TAAAACTTGATGCGTTTTGCACTACTCTTTCCATTTATATGCTGCAAACAACTACAGTCTTTGAAATATGGAAAA TCAGCAGTCTAAAGTTTGTTTTAAATTCTAAATTTAAAAAATCTTCAAATCTGAATATACCGCAAATGTCATGAG GCAATATATACATAAAATCAACCAACATATCTGAAAAGGATCATGAAAACCTGAGAAATGCTAATGGAGATTTGCT GGTACATAGGAATCTAGCAAATTCAGGAACCAAGGGGAAATGTTGTGAGATAACATTTACATTGTCAACCTTTAT TGACTTTGTTTTTACAATAAAAAATATTTTACAACTT

MVDRLANSEANTRRISIVENCFGAAGQPLTIPGRVLIGEGVLTKLCRKKPKARQFFLFNDILVYGNIVIQKKKYN KQHIIPLENVTIDSIKDEGDLRNGWLIKTPTKSFAVYAATATEKSEWMNHINKCVTDLLSKSGKTPSNEHAAVWV PDSEATVCMRCQKAKFTPVNRRHHCRKCGFVVCGPCSEKRFLLPSQSSKPVRICDFCYDLLSAGDMATCQPARSD SYSQSLKSPLNDMSDDDDDDDSSD

AAGATGGTCGCGCCCTGGACGCGGTTCTACTCCAACAGCTGCTGCTGTGTCGCCATGTCCGCACCGGCACCATC CTGCTCGGCGTCTGGTATCTGATCATCATGCTGTGGTACTGTTGATTTTATTGAGTGCCCTGGCTGATCCGGAT CAGTATAACTTTTCAAGTTCTGAACTGGGAGGTGACTTTGAGTTCATGGATGATGCCAACATGTGCATTGCCATT AACTCCATTCAGGAATACATACGGCAACTGCCTCCTAATTTTCCCTACAGAGATGATGTCATGTCAGTGAATCCT ACCTGTTTGGTCCTTATTATTCTTCTGTTTATTAGCATTATCTTGACTTTTAAGGGTTACTTGATTAGCTGTGTT TGGAACTGCTACCGATACATCAATGGTAGGAACTCCTCTGATGTCCTGGTTTATGTTACCAGCAATGACACTACG GTGCTGCTACCCCCGTATGATGCCACTGTGAATGGTGCTGCCAAGGAGCCACCGCCACCTTACGTGTCTGCC TAAGCCTTCAAGTGGGCGGAGCTGAGGGCAGCTTGACTTTGCAGACATCTGAGCAATAGTTCTGTTATTTCA CTTTTGCCATGAGCCTCTCTGAGCTTGTTTGTTGCTGAAATGCTACTTTTTAAAATTTAGATGTTAGATTGAAAA CTGTAGTTTTCAACATATGCTTTGCTGGAACACTGTGATAGATTAACTGTAGAATTCTTCCTGTACGATTGGGGA TATAATGGGCTTCACTAACCTTCCCTAGGCATTGAAACTTCCCCCAAATCTGATGGACCTAGAAGTCTGCTTTTG TACCTGCTGGGCCCCAAAGTTGGGCATTTTTCTCTCTGTTCCCTCTTTTTGAAAATGTAAAATAAAACCAAAAA TAGACAACTTTTTCTTCAGCCATTCCAGCATAGAGAACAAAACCTTATGGAAACAGGAATGTCAATTGTGTAATC ATTGTTCTAATTAGGTAAATAGAAGTCCTTATGTATGTGTTACAAGAATTTCCCCCACAACATCCTTTATGACTG AAGTTCAATGACAGTTTGTGTTTGGTGGTAAAGGATTTTCTCCATGGCCTGAATTAAGACCATTAGAAAGCACCA GGCCGTGGGAGCAGTGACCATCTGCTGACTGTTCTTGTGGATCTTGTGTCCAGGGACATGGGGTGACATGCCTCG TATGTGTTAGAGGGTGGAATGGATGTTTTGGCGCTGCATGGGATCTGGTGCCCCTCTTCTCCTGGATTCACATC CCCACCCAGGGCCCGCTTTTACTAAGTGTTCTGCCCTAGATTGGTTCAAGGAGGTCATCCAACTGACTTTATCAA GTGGAATTGGGATATATTTGATATACTTCTGCCTAACAACATGGAAAAGGGTTTTCTTTTCCCTGCAAGCTACAT CCTACTGCTTTGAACTTCCAAGTATGTCTAGTCACCTTTTAAAATGTAAACATTTTCAGAAAAATGAGGATTGCC TTCCTTGTATGCGCTTTTTACCTTGACTACCTGAATTGCAAGGGATTTTTATATATTCATATGTTACAAAGTCAG CAACTCTCCTGTTGGTTCATTATTGAATGTGCTGTAAATTAAGTTGTTTGCAATTAAAACAAGGTTTGCCCAC

MKMVAPWTRFYSNSCCLCCHVRTGTILLGVWYLIINAVVLLILLSALADPDQYNFSSSELGGDFEFMDDANMCIA
IAISLLMILICAMATYGAYKQRAAWIIPFFCYQIFDFALNMLVAITVLIYPNSIQEYIRQLPPNFPYRDDVMSVN
PTCLVLIILLFISIILTFKGYLISCVWNCYRYINGRNSSDVLVYVTSNDTTVLLPPYDDATVNGAAKEPPPPYVS
A

^{2809/6881} **FIGURE 2588**

 ${\tt MVAAKKTKKSLESINSRLQLVMKSGKYVLGYKQTLKMIRQGKAKLVILANNCPALRKSEIEYYAMLAKTGVHHYS} \\ {\tt GNNIELGTACGKYYRVCTLAIIDPGDSDIIRSMPEQTGEK}$

GCCCACTCCCACCGCCAGCTGGAACCCTGGGGACTACGACGTCCCTCAAACCTTGCTTCTAGGAGATAAAAAGAA CATCCAGTCATGGATAAAAATGAGCTGGTTCAGAAGGCCAAACTGGCCGAGCAGGCTGAGCGATATGATGACATG GCAGCCTGCATGAAGTCTGTAACTGAGCAAGGAGCTGAATTATCCAATGAGGAGGAATCTTCTCTCAGTTGCT TATAAAAATGTTGTAGGAGCCCGTAGGTCATCTTGGAGGGTCGTCTCAAGTATTGAACAAAAGACGGAAGGTGCT GAGAAAAAACAGCAGATGGCTCGAGAATACAGAGAGAAAATTGAGACGGAGCTAAGAGATATCTGCAATGATGTA CTGTCTCTTTTGGAAAAGTTCTTGATCCCCAATGCTTCACAAGCAGAGAGCAAAGTCTTCTATTTGAAAATGAAA GGAGATTACTACCGTTACTTGGCTGAGGTTGCCGCTGGTGATGACAAGAAAGGGATTGTCGATCAGTCACAACAA AACTTCTCTGTGTTCTATTATGAGATTCTGAACTCCCCAGAGAAAGCCTGCTCTCTTGCAAAGACAGCTTTTGAT GAAGCCATTGCTGAACTTGATACATTAAGTGAAGAGTCATACAAAGACAGCACGCTAATAATGCAATTACTGAGA GACAACTTGACATTGTGGACATCGGATACCCAAGGAGACGAAGCTGAAGCAGGAGAAGGAGGAGAAAAT<u>TAA</u>CCG GCCTTCCAACTTTTGTCTGCCTCATTCTAAAATTTACACAGTAGACCATTTGTCATCCATGCTGTCCCACAAATA GTTTTTTGTTTACGATTTATGACAGGTTTATGTTACTTCTATTTGAATTTCTATATTTCCCATGTGGTTTTTATG TTTAATATTAGGGGAGTAGAGCCAGTTAACATTTAGGGAGTTATCTGTTTTCATCTTGAGGTGGCCAATATGGGG ATGTGGAATTTTTATACAAGTTATAAGTGTTTGGCATAGTACTTTTGGTACATTGTGGCTTCAAAAGGGCCAGTG TAAAACTGCTTCCATGTCTAAGCAAAGAAAACTGCCTACATACTGGTTTGTCCTGGCGGGGAATAAAAGGGATCA TTGGTTCCAGTCACAGGTGTAGTAATTGTGGGTACTTTAAGGTTTGGAGCACTTACAAGGCTGTGGTAGAATCAT ACCCCATGGATACCACATATTAAACCATGTATATCTGTGGAATACTCAATGTGTACACCTTTGACTACAGCTGCA GAAGTGTTCCTTTAGACAAAGTTGTGACCCATTTTACTCTGGATAAGGGCAGAAACGGTTCACATTCCATTATTT GTAAAGTTACCTGCTGTTAGCTTTCATTATTTTTGCTACACTCATTTTATTTGTATTTAAATGTTTTAGGCAACC TAAGAACAAATGTAAAAGTAAAGATGCAGGAAAAATGAATTGCTTGGTATTCATTACTTCATGTATATCAAGCAC GATACTTGCCTAACATGCATGTGCTGTAAAAATAGTTAACAGGGAAATAACTTGAGATGATGGCTAGCTTTGTTT **AATGTCTTATGAAATTTTCATGAACAATCCAAGCATAATTGTTAAGAACACGTGTATTAAATTCATGTAAGTGGA** ATAAAAGTTTTATGAATGGACTTTTCAACTACTTCTCTACAGCTTTTCATGTAAATTAGTCTTGGTTCTGAAAC TTCTCTAAAGGAAATTGTACATTTTTTGAAATTTATTCCTTATTCCCTCTTGGCAGCTAATGGGCTCTTACCAAG TGTTCCATTTAAAATTTTGGCATATGGCATTTTCTAACTTAGGAAGCCACAATGTTCTTGGCCCATCATGACATT GGGTAGCATTAACTGTAAGTTTTGTGCTTCCAAATCACTTTTTGGTTTTTAAGAATTTCTTGATACTCTTATAGC CTTGTCACCAACCATTCTTACTTGGTGGCCATGTACTTGGAAAAAAGGCCGCATGATCTTTCTGGCTCCACTCAGT GTCTAAGGCACCCTGCTTCCTTTGCTTGCATCCCACAGACTATTTCCCTCATCCTATTTACTGCAGCAAATCTCT ANAATATTTCCTCAGTACTTTGCAGAAAACACCAAACAAAAATGCCATTTTAAAAAAAGGTGTATTTTTCTTTTA GAATGTAAGCTCCTCAAGAGCAGGGACAATGTTTTCTGTATGTTCTATTGTGCCTAGTACACTGTAAATGCTCAA TAAATATTGATGATGGGGGGCAGTGAGTCTTGATGATAAGGGTGAGAAACTGAAATCCC

MDKNELVQKAKLAEQAERYDDMAACMKSVTEQGAELSNEERNLLSVAYKNVVGARRSSWRVVSSIEQKTEGAEKK
QQMAREYREKIETELRDICNDVLSLLEKFLIPNASQAESKVFYLKMKGDYYRYLAEVAAGDDKKGIVDQSQQAYQ
EAFEISKKEMQPTHPIRLGLALNFSVFYYEILNSPEKACSLAKTAFDEAIAELDTLSEESYKDSTLIMQLLRDNL
TLWTSDTQGDEAEAGEGGEN

CCTTCTCCCCGGCGGTTAGTGCTGAGAGTGCGGAGTGTGTGCTCCGGGCTCGGAACACACATTTATTATAAAAA CCCCGCAGCAGCTCCAAGAAGGAACCAAGAGACCGAGGCCTTCCCGCTGCCCGGACCCGACACCCCTCGC TCCCCGCCGGCAGCCGGCAGCCGGCAGTGGATCGACCCCGTTCTGCGGCCGTTGAGTAGTTTTCAATTCCGG TTGATTTTTGTCCCTCTGCGCTTGCTCCCCGCTCCCCCCGGCTCCGGCCCCAGCCCCGGCACTCGCTCT CCTCCTCTCACGGAAAGGTCGCGGCCTGTGCCCTGCGGGCAGCCGTGCCGAG<mark>ATG</mark>AACCCCAGTGCCCCAGCTA CCCCATGGCCTCGCTCTACGTGGGGGACCTCCACCCCGACGTGACCGAGGCGATGCTCTACGAGAAGTTCAGCCC GGCCGGGCCCATCCTCCATCCGGGTCTGCAGGGACATGATCACCCGCCGCTCCTTGGGCTACGCGTATGTGAA CTTCCAGCAGCCGGCGGACGCGGAGCGTGCTTTGGACACCATGAATTTTGATGTTATAAAGGGCAAGCCAGTACG CATCATGTGGTCTCAGCGTGATCCATCACTTCGCAAAAGTGGAGTAGGCAACATATTCATTAAAAATCTGGACAA ATCCATTGATAATAAAGCACTGTATGATACATTTTCTGCTTTTGGTAACATCCTTTCATGTAAGGTGGTTTGTGA TGAAAATGGTTCCAAGGGCTACGGATTTGTACACTTTGAGACGCAGGAAGCAGCTGAAAGAGCTATTGAAAAAAT GAATGGAATGCTCCTAAATGATCGCAAAGTATTTGTTGGACGATTTAAGTCTCGTAAAGAACGAGAAGCTGAACT TGGAGCTAGGGCAAAAGAATTCACCAATGTTTACATCAAGAATTTTGGAGAAGACATGGATGATGAGCGCCTTAA GGATCTCTTTGGGCCTGCCTTAAGTGTGAAAGTAATGACTGATGAAAGTGGAAAATCCAAAGGATTTGGATTTGT AAGCTTTGAAAGGCATGAAGATGCACAGAAAGCTGTGGATGAGATGAACGGAAAGGAGCTCAATGGAAAACAAAT TTATGTTGGTCGAGCTCAGAAAAAGGTGGAACGGCAGACGGAACTTAAGCGCAAATTTGAACAGATGAAACAAGA TAGGATCACCAGATACCAGGGTGTTAATCTTTATGTGAAAAATCTTGATGATGGTATTGATGATGAACGTCTCCG GAAAGAGTTTTCTCCATTTGGTACAATCACTAGTGCAAAGGTTATGATGGAGGGTGGTCGCAGCAAAGGGTTTGG TTTTGTATGTTTCTCCTCCCCAGAAGAAGCCACTAAAGCAGTTACAGAAATGAACGGTAGAATTGTGGCCACAAA GCCATTGTATGTAGCTTAGCTCAGCGCAAAGAAGAGCGCCAGGCTCACCTCACTAACCAGTATATGCAGAGAAT AGCTATCCCACAGACTCAGAACCGTGCTGCATACTATCCTCCTAGCCAAGTTGCTCAACTAAGACCAAGTCCTCG CTGGACTGCTCAGGGTGCCAGACCTCATCCATTCCAAAATATGCCCGGTGCTATCCGCCCAGCTGCTCCTAGACC ACCATTTAGTACTATGAGACCAGCTTCTTCACAGGTTCCACGAGTCATGTCAACACAGCGTGTTGCTAACACATC AACACAGACAATGGGTCCACGTCCTGCAGCTGCAGCCGCTGCAGCTACTCCTGCTGTCCGCACCGTTCCACAGTA TAAATATGCTGCAGGAGTTCGCAATCCTCAGCAACATCTTAATGCACAGCCACAAGTTACAATGCAACAGCCTGC TGTTCATGTACAAGGTCAGGAACCTTTGACTGCTTCCATGTTGGCATCTGCCCCTCCTCAAGAGCAAAAGCAAAT GTTGGGTGAACGGCTGTTTCCTCTTATTCAAGCCATGCACCCTACTCTTGCTGGTAAAATCACTGGCATGTTGTT GGAGATTGATAATTCAGAACTTCTTCATATGCTCGAGTCTCCAGAGTCACTCCGTTCTAAGGTTGATGAAGCTGT AGCTGTACTACAAGCCCACCAAGCTAAAGAGGCTGCCCAGAAAGCAGTTAACAGTGCCACCGGTGTTCCAACTGT TTAAAATTGATCAGGGACCATGAAAAGAAACTTGTGCTTCACCGAAGAAAAATATCTAAACATCGAAAAAACTTAA ATAGTAAAATATAAAAACAAATTAATGTTTTATAGACCCTGGGAAAAAGAATTTTCAGCAAAGTACAAAAATTTA AAGCATTCCTTTCTTTAATTTTGTAATTCTTTACTGTGGAATAGCTCAGAATGTCAGTTCTGTTTTAAGTAACAG AATTGATAACTGAGCAAGGAAACGTAATTTGGATTATAAAATTCTTGCTTTAATAAAAATTCCTTAAACAGTG

MNPSAPSYPMASLYVGDLHPDVTEAMLYEKFSPAGPILSIRVCRDMITRRSLGYAYVNFQQPADAERALDTMNFD VIKGKPVRIMWSQRDPSLRKSGVGNIFIKNLDKSIDNKALYDTFSAFGNILSCKVVCDENGSKGYGFVHFETQEA AERAIEKMNGMLLNDRKVFVGRFKSRKEREAELGARAKEFTNVYIKNFGEDMDDERLKDLFGPALSVKVMTDESG KSKGFGFVSFERHEDAQKAVDEMNGKELNGKQIYVGRAQKKVERQTELKRKFEQMKQDRITRYQGVNLYVKNLDD GIDDERLRKEFSPFGTITSAKVMMEGGRSKGFGFVCFSSPEEATKAVTEMNGRIVATKPLYVALAQRKEERQAHL TNQYMQRMASVRAVPNPVINPYQPAPPSGYFMAAIPQTQNRAAYYPPSQVAQLRPSPRWTAQGARPHPFQNMPGA IRPAAPRPPFSTMRPASSQVPRVMSTQRVANTSTQTMGPRPAAAAAAATPAVRTVPQYKYAAGVRNPQQHLNAQP QVTMQQPAVHVQGQEPLTASMLASAPPQEQKQMLGERLFPLIQAMHPTLAGKITGMLLEIDNSELLHMLESPESL RSKVDEAVAVLQAHQAKEAAQKAVNSATGVPTV

GGCCAACAGGGGACCTGCATTATGGCCTGAGCCAGGAGGTGCAGCAGAAGATTGAGAAACAGTATGATGCAGATC TGGAGCAGATCCTGATCCAGTGGATCACCACCCAGTGCCGAAAGGATGTGGGCCGGTCCCAGCCTGGACGCGAGA CAGTAAAGAAGATCCAGGCCTCCACCATGGCCTTCAAGCAGATGGAGAAGATCTCTCAGTTCCTGCAAGCAGCTG AGCGGACGCTGAGGAATCTGGGTGGGTTGGCAGTAGCCTGGGATGATGGGCTCTTCTCTGGGGATCCCAACTGGT TCCCTAAGAATCCAAGGAGAATCCTCGGAACTTCTCGGATAACCAGCTGCAAGAGGGCAAGAACGTGATCGGGC TACAGATGGGGGGCATCTCAGGCAGGCATGACTGGCTACTGGATGCCACACCAGATCCTTTGATCCCACCCCAGG ${\tt CCAGAGCTCTTAAGCTCCCTTCTGTCAGGGTGAGGGGTTCAGCCTGTCCTATCACCTCTGAGGTGCCTGTTGGCA}$ GCCTCTCCCCGTGCTTACTAATACATTCCCCTCCCCATACCCATCAAAACTGGACCAACTGGCCTCTTCTTTTC CCCTGGGATCAAAATTTAGGGGCCTCAGTCCCTCACCGCCATGCCCTGGCCTGTTCTGTCTCTCCTTTTTCCCCC TGGCCTGTTCTGTCTCTGAGCTCTGTGCCCTCCGTTCATTCCATGGCTGGGAGTCAGTGATGCTGCCTCTGCCTT CTGATGCTGGACTGGCCTTGCTTCTACAAGTATGCTTCTCCCACAGCTGTGGCTGCAGGAACTTAATTTATAGGG TGGCAGAGGCCCTCATGGCTTCTCATTTTCCATTCCCTTCACTGTGGCTAAGGGGTGAGGGGACGGAGAG GGAGGGCTGCCTACCATGGTCTGGGGCTTGAGGAAGATGAGTTTGTCGATTTAAAGAATTTGTCATTT

AGTCTTTCCGCTTCTTGAATTTCTCTCTGTAAAGGAGATATATAATGAAAAGGAATTATTACAAGGTAAATTGGA CCTTCTTAGTGATACCAACATGGTAGACTTTGCTATGGATGTATACAAAAACCTTTATTCTGATGATATTCCTCA TGCTTTGAGAGAGAAAAGAACCACAGTGGTTGCACAACTGAAACAGCTTCAGGCAGAAACAGAACCAATTGTGAA GATGTTTGAAGATCCAGAAACTACAAGGCAAATGCAGTCAACCAGGGATGGTAGGATGCTCTTTGACTACCTGGC GGACAAGCATGGTTTTAGGCAGGAATATTTAGATACACTCTACAGATATGCAAAATTCCAGTACGAATGTGGGAA ${\tt TTACTCAGGAGCAGCAGAATATCTTTATTTTTTTAGAGTGCTGGTTCCAGCAACAGATAGAAATGCTTTAAGTTC}$ ACTCTGGGGAAAGCTGGCCTCTGAAATCTTAATGCAGAATTGGGATGCAGCCATGGAAGACCTTACACGGTTAAA AGAGACCATAGATAATAATTCTGTGAGTTCTCCACTTCAGTCTCTTCAGCAGAACATGGCTCATTCACTGGTC TCTGTTTGTTTTCTTCAATCACCCCAAAGGTCGCGATAATATTATTGACCTCTTCCTTTATCAGCCACAATATCT AAAACGTCGGCAGGTTCTAAAAGATCTAGTTAAAGTTATTCAACAGGAGTCTTACACATATAAAGACCCAATTAC AGAATTTGTTGAATGTTTATATGTTAACTTTGACTTTGATGGGGCTCAGAAAAAGCTGAGGGAATGTGAATCAGT GCTTGTGAATGACTTCTTCTTGGTGGCTTGTCTTGAGGATTTCATTGAAAATGCCCGTCTCTTCATATTTGAGAC TTTCTGTCGCATCCACCAGTGTATCAGCATTAACATGTTGGCAGATAAATTGAACATGACTCCAGAAGAAGCTGA ${\tt GGGTAACAATGCAGTCTCACCCTATCAGCAAGTGATTGAAAAGACCAAAAGCCTTTCCTTTAGAAGCCAGATGTT}$ GGCCATGAATATTGAGAAGAAACTTAATCAGAATAGCAGGTCAGAGGCTCCTAACTGGGCAACTCAAGATTCTGG TAAAGGGTGACTTACATTTTGGAAACAACATATTACGTATAAATTTTGAAGAATTGGAATAAAATTGATTCATTT TAAAAAAAA

MAEYDLTTRIAHFLDRHLVFPLLEFLSVKEIYNEKELLQGKLDLLSDTNMVDFAMDVYKNLYSDDIPHALREKRT TVVAQLKQLQAETEPIVKMFEDPETTRQMQSTRDGRMLFDYLADKHGFRQEYLDTLYRYAKFQYECGNYSGAAEY LYFFRVLVPATDRNALSSLWGKLASEILMQNWDAAMEDLTRLKETIDNNSVSSPLQSLQQRTWLIHWSLFVFFNH PKGRDNIIDLFLYQPQYLNAIQTMCPHILRYLTTAVITNKDVRKRRQVLKDLVKVIQQESYTYKDPITEFVECLY VNFDFDGAQKKLRECESVLVNDFFLVACLEDFIENARLFIFETFCRIHQCISINMLADKLNMTPEEAERWIVNLI RNARLDAKIDSKLGHVVMGNNAVSPYQQVIEKTKSLSFRSQMLAMNIEKKLNQNSRSEAPNWATQDSGFY

GAAAGATGGCGTCCCGCAAGGAAGGTACCGGCTCTACTGCCACCTCTTCCAGCTCCACCGCCGCGCGCAGCAGGGA TAATCAAACATTATCAAGAAGAAGAAGGACTGAAGTTGTTCAAGGAGTGCTTTTGGGTCTGGTTGTAGAAG ATCGGCTTGAAATTACCAACTGCTTTCCTTTCCCTCAGCACACAGAGGATGATGCTGACTTTGATGAAGTCCAAT ATCAGATGGAAATGATGCGGAGCCTTCGCCATGTAAACATTGATCATCTTCACGTGGGCTGGTATCAGTCCACAT ACTATGGCTCATTCGTTACCCGGGCACTCCTGGACTCTCAGTTTAGTTACCAGCATGCCATTGAAGAATCTGTCG TGGAAGTTTGTAAAGAAAAGGATTTTTCCCCTGAAGCATTGAAAAAAGCAAATATCACCTTTGAGTACATGTTTG AAGAAGTGCCGATTGTAATTAAAAATTCACATCTGATCAATGTCCTAATGTGGGAACTTGAAAAGAAGTCAGCTG TTGCAGATAAACATGAATTGCTCAGCCTTGCCAGCAGCAATCATTTGGGGAAGAATCTACAGTTGCTGATGGACA AACATCAGTATCAGCAGCGCCAGCAGGAGAATATGCAGCGCCAGAGCCGAGGAGAACCCCCGCTCCCTGAGG AGGACCTGTCCAAACTCTTCAAACCACCACAGCCGCCTGCCAGGATGGACTCGCTGCTCATTGCAGGCCAGATAA ACACTTACTGCCAGAACATCAAGGAGTTCACTGCCCAAAACTTAGGCAAGCTCTTCATGGCCCAGGCTCTTCAAG AATACAACAACTAAGAAAAGGAAGTTTCCAGAAAAGAAGTTAACATGAACTCTTGAAGTCACACCAGGGCAACTC TTGGAAGAAATATTTGCATATTGAAAAGCACAGAGGATTTCTTTAGTGTCATTGCCGATTTTGGCTATAACAG AAAAA

MASRKEGTGSTATSSSSTAGAAGKGKGKGGSGDSAVKQVQIDGLVVLKIIKHYQEEGQGTEVVQGVLLGLVVEDR LEITNCFPFPQHTEDDADFDEVQYQMEMMRSLRHVNIDHLHVGWYQSTYYGSFVTRALLDSQFSYQHAIEESVVL IYDPIKTAQGSLSLKAYRLTPKLMEVCKEKDFSPEALKKANITFEYMFEEVPIVIKNSHLINVLMWELEKKSAVA DKHELLSLASSNHLGKNLQLLMDRVDEMSQDIVKYNTYMRNTSKQQQQKHQYQQRRQQENMQRQSRGEPPLPEED LSKLFKPPQPPARMDSLLIAGQINTYCQNIKEFTAQNLGKLFMAQALQEYNN

2821/6881 FIGURE 2600A

AGTGAATCGGAAAGGAGGCGCCGGCTGTGGCGGCGGCGGGAGCTGCTCGGAAGCTACACCTCGCAAGGGCTCCCC CCTTTCCCCACCCCTCCCCGACCCTTTTCCCCTCCCGGGCCACCCCAGCCGCCCAACTCCCAGCGGAGAGCA AGGTTTTCTTCTGTTTTCATAGCCAGCCAGAACA<u>ATG</u>TTCTACGCACATTTTGTTCTCAGTAAAAGAGGGCCTCT GGCCAAAATTTGGCTAGCGGCCCATTGGGATAAGAAGCTAACCAAAGCCCATGTGTTCGAGTGTAATTTAGAGAG CAGCGTGGAGAGTATCATCTCACCAAAGGTGAAAATGGCATTACGGACATCAGGACATCTCTTACTGGGAGTAGT TCGGCCAGGTGTGGTTGACCTGCCTGAGGAAAATCGGGAAGCAGCTTATAATGCCATTACTTTACCTGAAGAATT TCATGACTTTGATCAGCCACTGCCTGACTTAGATGACATCGATGTGGCCCAGCAGTTCAGCTTGAATCAGAGTAG AGTGGAAGAGATAACCATGAGAGAAGAAGTTGGGAACATCAGTATTTTACAAGAAAATGATTTTGGTGATTTTGG AATGGATGATCGTGAGATAATGAGAGAGGCAGTGCTTTTGAGGATGACGACATGTTAGTAAGCACTACTACTTC TAACCTCCTATTAGAGTCTGAACAGAGCACCAGCAATCTGAATGAGAAAATTAACCATTTAGAATATGAAGATCA ATATAAGGATGATAATTTTGGAGAAGGAAATGATGGTGGAATATTAGATGACAAACTTATTAGTAATAATGATGG CGGTATCTTTGATGATCCCCCTGCCCTCTCTGAGGCAGGGGTGATGTTGCCAGAGCAGCCTGCACATGACGATAT GGATGAGGATGATAATGTATCAATGGGTGGGCCTGATAGTCCTGATTCAGTGGATCCCGTTGAACCAATGCCAAC CATGACTGATCAAACACCTTGTTCCAAATGAGGAAGAAGCATTTGCATTGGAGCCTATTGATATAACTGTTAA AGAAACAAAAGCCAAGAGGAAGAGGAAGCTAATTGTTGACAGTGTCAAAGAGTTGGATAGCAAGACAATTAGAGC CCAACTTAGTGATTATTCAGATATTGTTACTACTTTGGATCTGGCACCGCCCACCAAGAAATTGATGATGTGGAA AGAGACAGGAGGAGTAGAAAAACTGTTTTCTTTACCTGCTCAGCCTTTGTGGAATAACAGACTACTGAAGCTCTT TGAATTCCTCAAAGAATTTGAAAATCCAGAGGTTCCTAGAGAGGACCAGCAACAGCAGCATCAGCAGCGTGATGT TGAGTCAGCTATGCCTCCACCACCACCTCAGGGAGTTAAGCGAAAAGCTGGACAAATTGACCCAGAGCCTGTGAT GCCTCCTCAGCAGGTAGAGCAGATGGAAATACCACCTGTAGAGCTTCCCCCAGAAGAACCTCCAAATATCTGTCA AGAGGATGAAGATGCATCAGGGGGGCGATCAAGATCAGGAAGAAGAAGATGGAACAAAAGGACTCAGCAGATGCT TCATGGTCTTCAGCGTGCTCTTGCTAAAACTGGAGCTGAATCTATCAGTTTGCTTGAGTTATGTCGAAATACGAA CAGAAAACAAGCTGCCGCAAAGTTCTACAGCTTCTTGGTTCTTAAAAAGCAGCAAGCTATTGAGCTGACACAGGA ${\tt AGAACCGTACAGTGACATCATCGCAACACCTGGACCAAGGTTCCATATTATA}{\tt TAA}{\tt GGAGCTAGAAGCATTATAGC}$ TAGTGTTTGATTCACTAGTGCTTACAAATTGCCCCCATGTGTAGGGGACACAGAACCCTTTGAGAAAACTTAGAT TTTTGTCTGTACAAAGTCTTTGCCTTTTTCCTTCTTCATTTTTTTCCAGTACATTAAATTTGTCAATTTCATCTT TGAGGGAAACTGATTAGATGGGTTGTGTTTGTGTTCTGATGGAGAAAACAGCACCCCAAGGACTCAGAAGATGAT TTTAACAGTTCAGAACAGATGTGTGCAATATTGGTGCATGTAATAATGTTGAGTGGCAGTCAAAAGTCATGATTT TTATCTTAGTTCTTCATTACTGCATTGAAAAGGAAAACCTGTCTGAGAAAATGCCTGACAGTTTAATTTAAAACT ATGGTGTAAGTCTTTGACAAGAAAAAAAAAACAAACAATCTTTTTCCATCAGTAACACTGGCAATCTTCCTGT TAACCACTCTCCTTAGGGATGGTATCTGAAACAACAATGGTCACCCTCTTGAGATTCGTTTTAAGTGTAATTCCA TAATGAGCAGAGGTGTACGCGAAATTGTGTTATGACTGATAGCCTTCAGCTACAAAAAGATAGGACTGACCTGGT TTAAAGTGTTCTATTTTGTAAATCATTCCATTTGAGTCTTTCTGATGAACTTGGCTATACTGAAATCTGTTATTT TAGTGAGGCTCCAAAATGAGCAAAGCTAGGCCTGATTAGAGTAGAGTGACTATTAAAAAACATAACTTTCTAGGA GCTATAAATCAAAGTTTTAAAAAGATGTTTGGATATATTTGAGTATTCCGATCATGAAAACAGAAATTGCCCTGC CTACTACAAGGACAGACTGATGGGAAATTATGCACCTGGTCAACTTAGCTTTTAAGCAGACGATGCTGTAAAAAAC TAACGGCTTCTCTGATATTTATTGTAAGTTTTAGTACTGATCTCCTTTTCCAGTGCTGCACACTCCTGGTTTTGGA ACTTTAATAGCGTTGCAACGAAATCCTATATCCAGTTTCCTGTAATTTAATTGAAGAAAAATACATCCAAATAAA GACTTTATTATTAACAGACCAGATAGCATCAGAAATCATGTGACTGTTATGATTATCAGAATATGTCTTAACTTT CTCAGACTTCAGTGTATACCCAATAATTTAAAATTATGTGAAATGTTTTAAATTTGTGAACTCGTAATTACTGTT TTAATGATTCAGTTTCTTCAGAGTGGTAATTGTATAAAATTGCTATTGCAGCTTTATATTCAATATGATGTGCCT GTAAACCAAGGAGTTTTCCCCGTTTGTAAAAAGACATTGTAGATAATTGAATGTTTGATTTTAGAAAGGTCATTA GTTTCTTGTTACACATTTTGTTAGTCTGGTTTTTGTTGCTTATCGGGTTTAATATTGTTCTTGAAAATAGTTGAT

2822/6881 FIGURE 2600B

GCTATGTTATGTATAACTTTTCTAATAAAAGTTGTGTTATAAGCTGT